

**FIFTH FIVE-YEAR REVIEW REPORT FOR
SUMMIT NATIONAL SUPERFUND SITE
PORTAGE COUNTY, OHIO**



Prepared by

**U.S. Environmental Protection Agency
Region 5
Chicago, Illinois**

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LIST OF ABBREVIATIONS & ACRONYMS

CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
C-56	hexachlorocyclopentadiene
EC	environmental covenant
EPA	United States Environmental Protection Agency
ESD	explanation of significant differences
FYR	five-year review
ICs	institutional controls
ISCO	in-situ chemical oxidation
LIU	Lower Intermediate Unit
MCL	maximum contaminant level
NCP	National Contingency Plan
NPL	National Priorities List
O&M	operation and maintenance
Ohio EPA	Ohio Environmental Protection Agency
OMMP	Operation, Maintenance and Monitoring plan
OU	operable unit
PAHs	polycyclic aromatic hydrocarbons
PCBs	polychlorinated biphenyls
PCE	tetrachloroethene
PQL	practical quantitation limit
PRPs	potentially responsible parties
RAOs	remedial action objectives
ROD	record of decision
RPM	remedial project manager
Site	Summit National Superfund Site
SNFT	Summit National Facility Trust
SSIPL	site-specific indicator parameter list
SVOCs	semivolatile organic chemicals
TAL	target analyte list
TCE	1,1,1-trichloroethane
TCL	target compound list
TSCA	Toxic Substances Control Act
UECA	Uniform Environmental Covenants Act
ug/l	micrograms per liter
UIU	Upper Intermediate Unit
UU/UE	unlimited use/unrestricted exposure
VOCs	volatile organic chemicals
WTU	Water Table Unit

I. INTRODUCTION

The purpose of a five-year review (FYR) is to evaluate the implementation and performance of a remedy in order to determine if the remedy is and will continue to be protective of human health and the environment. The methods, findings, and conclusions of reviews are documented in FYR reports such as this one. In addition, FYR reports identify issues found during the review, if any, and document recommendations to address them.

The United States Environmental Protection Agency (EPA) prepared this FYR pursuant to the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Section 121, consistent with the National Contingency Plan (NCP)(40 CFR Section 300.430(f)(4)(ii)), and considering EPA policy.

This is the fifth FYR for the Summit National Superfund Site (Site). The triggering action for this statutory review is the completion date of the previous FYR. The FYR has been prepared due to the fact that hazardous substances, pollutants, or contaminants remain at the site above levels that allow for unlimited use and unrestricted exposure (UU/UE).

The Site consists of one operable unit (OU), which is addressed in this FYR. The site-wide OU addresses the Site's soil, sediment, and groundwater.

The Summit National Superfund Site FYR was led by EPA remedial project manager (RPM) Pablo N. Valentín. Participants included EPA community involvement coordinator Susan Pastor and the Ohio Environmental Protection Agency (Ohio EPA) project manager Regan Williams. The potentially responsible parties (PRPs) and Ohio EPA were notified of the initiation of the FYR. The review began on 12/1/2017.

Site Background

The Summit National Site is located at 1240 Alliance Road in Deerfield Township, Portage County, approximately 45 miles southeast of Cleveland, Ohio. It is a roughly rectangular property at the southeast corner of the intersection of Ohio Route 225 and U.S. Route 224 (see Figure 1). Prior to the remedial construction, the Site contained the remains of a coal tippie and a scale house in the northwest corner, two dilapidated buildings in the northeast corner, an abandoned incinerator and two small buildings in the southeast corner, and two ponds (referred to as the east pond and the west pond) across the center of the property (see Figure 2). All of these features were removed during the final cleanup. The strata at the Site have been characterized as three separate hydrogeologic units: the Water Table Unit (WTU), the Upper and Lower Intermediate Units (UIU and LIU) and the Upper Sharon aquifer. The WTU is generally from 5 to 12 feet below grade and flows to the southeast. Groundwater in the UIU flows generally southeastward and in the LIU, it flows westward. The Upper Sharon aquifer flows to the north.

Prior to 1974, the 11.5-acre Site was formerly a coal strip mine and contained a coal wash pond and coal stockpile. The Site was used for storage and disposal of industrial waste and incineration of liquid waste from April 1974 until June 1978. The Site is bordered by a skating rink, a school bus storage facility and a residence to the north, a permitted solid waste landfill to the west, an undeveloped brushy wooded area to the east, and a commercial concrete facility and an old unpermitted landfill to the south. The surrounding area is a mix of commercial, agricultural and residential properties. Approximately 4,500

people live within three miles of the Site. Surface water and shallow groundwater in the vicinity of the Site flow to the southeast, toward the Berlin Lake reservoir, which is a standby water supply for the City of Youngstown. More detailed background information about the Site is available in the previous FYR Report issued by EPA on July 16, 2013 (listed in Appendix A).

FIVE-YEAR REVIEW SUMMARY FORM

SITE IDENTIFICATION		
Site Name: SUMMIT NATIONAL		
EPA ID: OHD980609994		
Region: 5	State: OH	City/County: Deerfield Township/ Portage County
SITE STATUS		
NPL Status: Final		
Multiple OUs? No	Has the site achieved construction completion? Yes	
REVIEW STATUS		
Lead agency: EPA <i>[If "Other Federal Agency", enter Agency name]:</i>		
Author name (Federal Project Manager): Pablo N. Valentin		
Author affiliation: EPA Region 5		
Review period: 12/1/2017 - 6/22/2018		
Date of site inspection: 6/21/2018		
Type of review: Statutory		
Review number: 5		
Triggering action date: 7/16/2013		
Due date (five years after triggering action date): 7/16/2018		

II. RESPONSE ACTION SUMMARY

Basis for Taking Action

Hazardous substances and other contaminants released at the Site in each medium included a variety of volatile organic chemicals (VOCs), semivolatile organic chemicals (SVOCs), pesticides, polychlorinated biphenyls (PCBs), and inorganic chemicals (i.e., metals). The contaminants found at the Site in various media are shown in the four tables below: soils (Table 1), sediments (Table 2), surface water (Table 3), and groundwater (Table 4).

Table 1: Contaminants Found in Soils

VOCs	SVOCs/ Pesticides/ PCBs	Inorganics
methylene chloride	phenol	arsenic
acetone	1,4-dichlorobenzene	barium
carbon disulfide	1,2-dichlorobenzene	beryllium
1,1-dichloroethene	isophorone	chromium
1,1-dichloroethane	1,2,4-trichlorobenzene	copper
trans-1,2-dichloroethene	naphthalene	
1,2-dichloroethane	2-methylnaphthalene	
2-butanone (MEK)	fluorene	
1,1,1-trichloroethane (TCA)	hexachlorobenzene	
trichloroethene	phenanthrene	
benzene	di-n-butylphthalate	
4-methyl-2-pentanone	butylbenzylphthalate	
tetrachloroethene (PCE)	bis-2-ethylhexylphthalate	
toluene	di-n-octylphthalate	
chlorobenzene	indeno(1,2,3-c,d)pyrene	
ethylbenzene	dibenz(a,h)anthracene	
xylene (total)	benzo(g,h,i)perylene	
	4,4-DDT	
	PCBs (total)	

Table 2: Contaminants Found in Sediments

VOCs	SVOCs/ Pesticides/ PCBs	Inorganics
methylene chloride	n-nitrosodiphenylamine	barium
acetone	hexachlorobenzene	chromium
1,1-dichloroethene	di-n-butylphthalate	copper
1,1-dichloroethane	bis-2-ethylhexylphthalate	mercury
trans-1,2-dichloroethene	di-n-octylphthalate	cyanide
1,2-dichloroethane	PCBs (total)	
TCE		
trichloroethene		
2-butanone		
toluene		
benzene		
ethylbenzene		
chlorobenzene		
xylene (total)		

Table 3: Contaminants Found in Surface Water

VOCs	SVOCs/ Pesticides/ PCBs	Inorganics
methylene chloride	phenol	arsenic
acetone	aniline	barium
1,1-dichloroethane	1,4-dichlorobenzene	beryllium
1,2-dichloroethane	1,2-dichlorobenzene	cadmium
2-butanone (MEK)	hexachloroethane	chromium
TCE	isophorone	nickel
4-methyl-2-pentanone	benzoic acid	
PCE	bis-2-ethylhexylphthalate	
toluene	benzo(b)fluoranthene	
chlorobenzene	benzo(k)fluoranthene	
xylenes (total)	benzo(a)pyrene	
	Indeno(1,2,3-c,d)pyrene	
	dibenz(a,h)anthracene	
	benzo(g,h,i)perylene	

Table 4: Contaminants Found in Groundwater

VOCs	SVOCs/ Pesticides/ PCBs	Inorganics
methylene chloride	4-methylphenol	aluminum
acetone	2,4-dimethylphenol	arsenic
1,1-dichloroethane	4-chloro-3-methylphenol	barium
1,2-dichloroethane	phenol	cadmium
2-butanone	isophorone	chromium
TCE	naphthalene	manganese
trichloroethane	2-methylnaphthalene	nickel
4-methyl-2-pentanone	bis-2-ethylhexylphthalate	tin
toluene	pyrene	barium
ethylbenzene	dimethylphthalate	
1,1-dichloroethene	di-n-octylphthalate	
trans-1,2-dichloroethene	acenaphthalene	
benzene	dibenzofuran	
xylenes (total)	diethylphthalate	
PCE	fluorene	
	hexachlorobenzene	
	phenanthrene	
	anthracene	
	di-n-butylphthalate	
	fluoranthene	
	butylbenzylphthalate	
	hexachlorocyclopentadiene	

Response Actions

In August 1979, the State of Ohio filed a complaint against three individuals - all either current or former owners of the Site property - alleging the operation of a solid waste disposal facility without a permit, creation of a public nuisance, failure to comply with orders from Ohio EPA and installation of facilities for the storage and disposal of liquid wastes without submitting plans to the state agency. After an investigation confirmed the presence of more than 7,500 gallons of hexachlorocyclopentadiene, also known as C-56, a chemical used in the manufacture of pesticides, EPA informed the then-owner of the Site that remedial action was being planned pursuant to Section 311 of the Clean Water Act. The owner declined to take action or to fund a cleanup, so EPA funded the cleanup of C-56 waste from September through November 1980.

From early spring to late fall of 1980, Ohio EPA fenced the Site, graded the surface to control surface water run on and run off, identified the contents and staged about 2,000 drums, characterized the contents of several bulk tanks, and installed two on-site and four off-site monitoring wells.

During 1980 and 1981, some of the companies that had brought waste to the Site identified themselves and voluntarily removed their wastes. In November 1980, an agreement was reached between the State of Ohio and eight generators that provided \$2.5 million for a surface cleanup. The cleanup operation included removal of 17,000 drums, bulk tanks, a concrete pit and its contents, surface debris, and a small amount of contaminated soil. The surface cleanup was concluded in June 1982.

During the spring of 1987, EPA Region 5 Emergency Response personnel responded to an emergency situation involving periodic overflows from the east pond to an adjacent residential property. The response included the removal of a buried tank near the incinerator that used to operate at the Site.

EPA issued a record of decision (ROD) for the Site on June 30, 1988, and later issued a ROD amendment on November 2, 1990, and an explanation of significant differences (ESD) on March 23, 1992. The selected remedy was designed to address three major remedial action objectives (RAOs): 1) protection and enhancement of the quality of the groundwater and recovery of the groundwater resource in the vicinity of the Site; 2) protection of the quality of the surface water in the vicinity of the Site; and 3) protection of the public from direct contact with contaminated material on or near the Site, and from migration of surficial contaminants via surface runoff, wind erosion and volatilization.

The selected remedy for the Site, as documented in the ROD, ROD Amendment, and ESD, included the following remedy components:

- Construction of a chain link fence around the Site's boundary.
- Excavation and on-site incineration of 24,000 cubic yards of on-site soils, 4,000 cubic yards of perimeter sediments, and the contents of an estimated 900 to 1,600 buried drums.
- Demolition or dismantling of all on-site structures for on-site disposal.
- Collection and treatment of surface water from two on-site ponds and from drainage ditches, followed by excavation and on-site treatment of the sediments from the ponds.
- Extraction of groundwater from the WTU by a pipe and media drain system (i.e., passive system) along the southern boundary and the southern ends of the eastern and western boundaries, and extraction of additional groundwater via extraction wells in the Intermediate Unit, with treatment of all extracted groundwater.

- Removal/relocation of a vacant residence.
- Testing of the ash from the incinerated soil and sediment to ensure compliance with EPA and State standards before using the ash as fill to re-grade the Site prior to placement of the final cover. In the event the incinerator is unable to meet Toxic Substances Control Act (TSCA) standards for PCBs during the test burn, PCB-contaminated soil exceeding 50 parts per million would be disposed off-site at a TSCA landfill.
- Regrading and installation of a soil cover over about 10.6 acres of the Site, consisting of 18 inches of loam, six inches of topsoil, and a vegetative cover.
- Rerouting the south and east drainage ditches to uncontaminated off-site areas.
- Limiting access and implementing deed restrictions to limit future uses of the Site.

Status of Implementation

A consent decree between EPA, Ohio EPA, and the settling PRPs was entered and became effective on June 11, 1991. The settling PRPs formed the Summit National Facility Trust (SNFT) to implement the selected remedy. Following completion of the remedial design, the remedial action was implemented in five phases from June 30, 1993, to August 23, 1995. Between August 1994 and April 1995, approximately 21,100 tons of soil and sediments were incinerated on-site. Soils were tested for organic concentrations and toxicity characteristic leaching procedure metals in 500-ton batches. The only change in the selected remedy from what was anticipated was that the contents of 480 overpacked drums were taken off-site for disposal instead of being incinerated on-site. EPA conducted the final site inspection in August 1995 and the Site achieved the construction completion milestone on September 18, 1995, with EPA's issuance of the Preliminary Close-Out Report. Institutional controls (ICs) were implemented at a later date and are discussed below.

In April 1995, the SNFT submitted an evaluation of the groundwater extraction system to EPA and Ohio EPA which showed that the groundwater contamination in the WTU was effectively contained by the pipe and media drain system but that the extraction wells installed in the Intermediate Unit were not providing an effective horizontal area of capture to contain groundwater in the Intermediate Unit at the Site boundary. The evaluation also showed that the extraction wells in the Intermediate Unit would likely draw contaminants from the WTU into the Intermediate Unit along portions of the pipe and media drain. The evaluation also concluded that the groundwater drawdown created by the pipe and media drain in the WTU induces a natural upward gradient from the Intermediate Unit to the pipe and media drain. Based on the April 1995 evaluation, EPA and Ohio EPA approved the shutdown of the groundwater extraction wells in May 1995. The pipe and media drain groundwater collection system continued to operate, along with the groundwater treatment system.

In the 2004 ten-year groundwater evaluation (submitted in March 2005), the SNFT requested permission to suspend operation of the groundwater extraction and treatment system. The request was based on the stability of on-site groundwater contaminant concentrations and the absence of an indication of adverse impacts to off-site groundwater in any of the groundwater units, including before any remedial action work at the Site and during the 11 years of active groundwater pumping operations. In June 2005, the SNFT contractor submitted a "Work Plan for Groundwater Migration Evaluation" to Ohio EPA that included post-shutdown evaluation monitoring. Ohio EPA approved the Work Plan on July 18, 2005.

Approval of the plan allowed the SNFT to shut down the groundwater collection and treatment system and to continue collecting groundwater hydraulic monitoring data as well as groundwater samples for chemical analysis in order to determine whether the groundwater plume would remain stable without operation of the system. On August 31, 2005, the groundwater extraction and treatment system was shut down, which commenced the shutdown evaluation period. The sampling event that took place that month was established as the pre-shutdown baseline monitoring event for the groundwater migration evaluation. The system has remained in shutdown status since that time. Contingency criteria for restarting the extraction system or taking other measures are discussed below in the Data Review section of this FYR.

Institutional Controls

ICs have been implemented at the Site in the form of an environmental covenant (EC) that conforms to the Ohio Uniform Environmental Covenants Act (UECA), as summarized in the table below.

Table 5: Summary of Implemented ICs

Media, engineered controls, and areas that do not support UU/UE based on current conditions	ICs Needed	ICs Called for in the Decision Documents	Impacted Parcel(s)	IC Objective	Title of IC Instrument Implemented and Date
Land - On Site	Yes	Yes	Sitewide	Prohibit any filling, grading, excavating, building, drilling, mining, farming or other development on property within the Site, except for activities required pursuant to the consent decree.	EC per the Ohio UECA, recorded with Portage County Recorder on June 5, 2013.
Groundwater - On Site current area that exceeds groundwater cleanup standards	Yes	Yes	Sitewide	Prohibit groundwater use, extraction, or development until cleanup standards are achieved.	EC per the Ohio UECA, recorded with Portage County Recorder on June 5, 2013.
Surface Water - On Site	Yes	Yes	Sitewide	Prohibit use of surface water within the Site for any purpose.	EC per the Ohio UECA, recorded with Portage County Recorder on June 5, 2013.
Other Remedial Action Components	Yes	Yes	Sitewide	Prohibit inconsistent uses and protect the integrity of the remedy components.	EC per the Ohio UECA, recorded with Portage County Recorder on June 5, 2013.

Maps which depict the current conditions of the Site and areas which do not allow for UU/UE were developed as part of the implementation of ICs. The ICs apply to the entire Site area shown in Figure 3 and in Exhibit B to the EC (see Appendix B).

Status of Access Restrictions and ICs: Access to the Site is restricted by a fence. All required ICs at the Site have been implemented.

Current Compliance: Based on inspections and interviews with the PRPs' site manager, EPA is not aware of Site or media uses which are inconsistent with the stated objectives of the ICs.

Long-Term Stewardship: Long-term protectiveness at the Site requires compliance with use restrictions to assure the remedy continues to function as intended. To assure proper maintenance and monitoring of the ICs that have been implemented at the Site, long-term stewardship procedures were put in place in September 2013 as part of the Operation, Maintenance and Monitoring Plan (OMMP). These procedures are reviewed by the PRPs on an annual basis to ensure proper monitoring and enforcement of the ICs at the Site. The OMMP includes regular inspection of the ICs and annual certification to EPA that the ICs are in place and effective.

Systems Operations/Operation & Maintenance

Operation of the groundwater collection system and on-site treatment of contaminated water was conducted in accordance with the OMMP from November 1995 through August 2005. The primary activities during that time included operation, maintenance, and monitoring of the groundwater collection/extraction system, groundwater treatment system, and treated water discharge system, and inspection and maintenance of the Site cover and fence. Since shutdown of the collection/extraction and treatment system in August 2005, the primary activities at the Site have been various monitoring activities and inspection and maintenance of the Site cover and fence.

Groundwater treatment plant monitoring consisted of monthly influent and treated effluent sampling and analysis, and recording of daily flow rates. Results were submitted to Ohio EPA and EPA monthly through August 2005. Groundwater quality monitoring was conducted at startup and twice per year for the first five years of operation, and annually thereafter. Groundwater hydraulic monitoring was performed monthly for the first year of operation, then quarterly through August 2005, then twice per year through 2008, and annually since 2009. For the first three rounds of groundwater quality monitoring, the samples were analyzed for the full target compound list (TCL) and target analyte list (TAL). A site-specific indicator parameter list (SSIPL) was then developed and approved by Ohio EPA and EPA. Since development and approval of the SSIPL, the groundwater monitoring program includes annual sampling of selected WTU and UIU on-site and downgradient monitoring wells, with samples analyzed for the SSIPL, except that every fifth year all wells in the monitoring well network are sampled for full TCL/TAL analysis. The wells sampled during the routine annual events include 8 WTU wells (on-site wells MW-11, MW-107, MW-108, MW-111, and MW-113, and downgradient off-site wells MW-4, MW-114 [sentinel], and MW-115 [sentinel]) and 4 UIU wells (on-site wells MW-207 and MW-224, and downgradient off-site wells MW-209 and MW-220).

Groundwater monitoring reports, as well as annual evaluation and progress reports, are submitted to EPA and Ohio EPA. Operation and maintenance (O&M) activities include periodic inspection and maintenance of the Site cover, monitoring wells, and perimeter fence.

Table 6: Summit National Superfund Site O&M Costs – Years 2013 thru 2017

	2013	2014	2015	2016	2017
Accounting	\$9,296	\$11,130	\$11,488	\$6,935	\$7,209
Insurance	\$5,193	\$5,731	\$5,786	\$2,622	\$14,874
Labor	\$25,405	\$33,540	\$27,415	\$23,254	\$29,171
Groundwater Monitoring & Consulting	\$54,974	\$74,506	\$27,166	\$29,121	\$31,867
Waste Removal	\$0	\$0	\$0	\$0	\$9,978
Fees	\$0	\$0	\$0	\$76	\$96
Maintenance	\$4,500	\$0	\$4,557	\$0	\$0
Utilities/Supplies	\$11,391	\$39,108	\$6,635	\$7,851	\$6,654
Agency Oversight	\$8,807	\$38,650	\$865	\$570	\$0
Total	\$119,566	\$202,665	\$83,912	\$70,429	\$99,849

III. PROGRESS SINCE THE LAST REVIEW

This section includes the protectiveness determinations and statements from the last FYR as well as the recommendations from the last FYR and the current status of those recommendations.

Table 7: Protectiveness Determinations/Statements from the 2013 FYR

OU #	Protectiveness Determination	Protectiveness Statement
1 / Sitewide	Protective	This Fourth Five-Year Review concludes that the remedy is protective of human health and the environment. Exposure pathways to contaminated groundwater are being controlled and exposure to contaminated soil at the Site has been addressed by incinerating the most heavily-contaminated soils, applying a clean soil cover and a vegetative cover, and by fencing that surrounds the Site. All required ICs have been implemented, with an EC under the Ohio UECA recorded on June 5, 2013. Compliance with effective ICs will be ensured through long-term stewardship by maintaining, monitoring, and enforcing effective ICs.

There were no issues & recommendations in the last FYR that affected the protectiveness of the remedy.

The last FYR noted a minor issue, specifically that long-term stewardship needed to be assured for the Site. The FYR stated that long-term stewardship procedures would be put in place as part of the OMMP, that the procedures would be reviewed by the PRP on an annual basis to ensure proper monitoring and enforcement of the ICs, and that the OMMP would include regular inspection of the ICs and annual certification to EPA that the ICs are in place and effective. The FYR stated that the long-term stewardship procedures were expected to be in place by September 2013.

Update on Minor Issue Identified in 2013 FYR: Long-term stewardship procedures were put in place in September 2013 as part of the OMMP. These procedures are reviewed by the PRPs on an annual basis to ensure proper monitoring and enforcement of the ICs at the

Site. The OMMP includes regular inspection of the ICs and annual certification to EPA that the ICs are in place and effective.

IV. FIVE-YEAR REVIEW PROCESS

Community Notification, Involvement & Site Interviews

A public notice was made available by a newspaper posting in the Record-Courier, Kenton, Ohio, on February 20, 2018 (see Appendix C), stating that there was a FYR and inviting the public to submit any comments to EPA. EPA received and responded to two inquiries about the Site during the FYR process.

The FYR report will be made available at the Site information repository located at Reed Memorial Library, 167 E Main Street, Ravenna, Ohio, and online at <http://www.epa.gov/superfund/summit-national>.

Data Review

Monitoring of groundwater contaminant concentrations, hydraulic containment, and the groundwater treatment system (while it was operating) have been ongoing since November 1994. The data are regularly reported to and reviewed by EPA and Ohio EPA. For this FYR, all data since 1994 were reviewed, and particularly the data obtained since the last FYR (i.e., data from sampling events in 2013, 2014, 2015, 2016, and 2017).¹

Groundwater

The objectives of the annual groundwater monitoring program are to characterize any changes in groundwater quality in the WTU and UIU underlying the interior affected area of the Site and in the sentinel wells downgradient of the Site. The results from the sentinel wells were evaluated using the extraction system shutdown contingency criteria established for the Site as modified in 2010, as follows:

"If VOCs above their respective maximum contaminant level (MCL) are detected in the sentinel wells (off-site downgradient WTU monitoring wells MW-114 and MW-115), SNFT will evaluate options to mitigate the release (e.g., restart the groundwater extraction system, implement in-situ chemical oxidation (ISCO) to treat the released groundwater, phytoremediation, etc.). The sentinel wells are located 70 to 80 feet south of the southern property boundary and wet well of the pipe and media drain.

"During pumping of groundwater from the pipe and media drain, the WTU zone of groundwater capture extends 100 to 200 feet south of the pipe and media drain at the wet well. In this case, off-site downgradient WTU monitoring wells MW-116, MW-117 and MW-118 (approximately 230 feet south of the southern property boundary) will be used to verify whether there is any long term impact to the groundwater south of the Site and outside the influence of the pipe and media drain."

¹ The groundwater monitoring data from the 2018 sampling event was not yet available when this FYR report was written.

During this FYR period, groundwater quality monitoring was conducted annually. Samples were analyzed for the SSIPL during each annual event – which includes 8 WTU wells and 4 UIU wells, as noted earlier – except the 2014 event, which underwent full TCL/TAL analysis at all monitoring wells in the network. The results from the 2013², 2014, 2015, 2016, and 2017 groundwater sampling events are provided in Tables 8a through 8e, respectively. Historic groundwater sampling results are displayed graphically in Appendix D, which shows time-series plots of the results for each individual SSIPL VOC at each individual WTU and UIU annual-event monitoring well. A summary of all of the SSIPL VOC results for the WTU and UIU annual-event monitoring wells in 2004 and during the post-shutdown period (2009-2017) are presented on Figure 3 (WTU wells) and Figure 4 (UIU wells). Electronic database files containing all historic results are maintained by Eagon & Associates, Inc. (a contractor for the SNFT) and are available upon request.

The groundwater monitoring data collected from 2013 through 2017 from the two WTU sentinel wells show the following:

- At MW-114, one SSIPL VOC – acetone (which has no MCL) – was detected twice, in 2016 and 2017, at estimated “J-flagged” values that were less than the practical quantitation limit (PQL).
- At MW-115, four SSIPL VOCs were detected, as follows:
 - Two VOCs – 1,2-dichloroethane (MCL = 5 ug/L) and trans-1,2-dichloroethene (MCL = 100 ug/L) were detected only during the 2013 sampling event, and at levels well below their respective MCLs.
 - Two VOCs – 1,1-dichloroethane (no MCL) and cis-1,2-dichloroethene (MCL = 70 ug/L) – were detected each year, which is consistent with historic data, but with decreasing concentration trends compared to historic data. Cis-1,2-dichloroethene was well below its MCL.

Tables 9a through 9e summarize the detections at the sentinel wells during this review period and present a comparison with MCLs, where applicable.

Based on the data from the sentinel wells, EPA and Ohio EPA agree that no contingency actions need to be taken at this time, and the groundwater collection and treatment system can remain off, pending the results of the 2018 and future groundwater sampling events.

A review of the groundwater data collected from 2013 through 2017 from the other WTU and UIU annual-event monitoring wells shows the following:

- Contaminant concentrations in downgradient WTU off-site monitoring wells (MW-4, in addition to sentinel wells MW-114 and MW-115) have remained either non-detect or similar to the concentrations detected since the 2004 baseline sampling event.
- Contaminant concentrations at most on-site WTU monitoring wells (MW-11, MW-107, MW-111, MW-113) were consistent with historic results. Contaminant concentrations at the other on-site WTU monitoring well (MW-108) continued to show increasing trends for certain SSIPL VOCs, as shown in the plots in Appendix D, but the detected compounds remain contained within the Site boundaries, as evidenced by continued non-detections of SSIPL VOCs in the closest WTU downgradient well (MW-4).

² The groundwater monitoring data from the 2013 sampling event was not evaluated in the 2013 FYR so is included in this FYR.

- Contaminant concentrations in downgradient UIU off-site monitoring wells (MW-209 and MW-220) have remained either non-detect or similar to (if not lower than) the concentrations detected since the 2004 baseline sampling event. The only detections were for acetone (detected at MW-209 each year during this review period at concentrations consistent with historic results, and detected at MW-220 only in 2017 at concentrations lower than historic results) and toluene (detected at MW-209 only in 2015 at a low “J-flagged” estimated concentration).
- Contaminant concentrations at on-site UIU wells (MW-207 and MW-224) were all non-detect during this review period.

Overall, the groundwater monitoring results collected and evaluated during this review period confirm that the Site continues to achieve the objective of on-site containment of waste-derived constituents. All post-shutdown monitoring, including the data collected during this FYR period, have demonstrated that the cessation of pumping operations in 2005 has not resulted in detrimental impacts to groundwater quality off-site.

Hydraulic Monitoring

Review of hydraulic monitoring data since the startup of the groundwater collection system, in conjunction with a review of the groundwater quality monitoring data, have shown that hydraulic containment has been consistently maintained, even following shutdown of the groundwater collection and treatment system. Groundwater hydraulic monitoring is currently performed annually, and consists of taking groundwater level measurements at the network of on-site and off-site monitoring wells and piezometers in the WTU and UIU. The groundwater elevation contours during this review period demonstrate that the horizontal direction of groundwater flow is generally southeasterly in the WTU, as has been consistently observed in the past. The groundwater flow direction in the UIU is generally easterly and is consistent with the pre-shutdown groundwater flow direction in this unit. As discussed earlier, the results of the groundwater quality monitoring demonstrate that Site contamination has not migrated off-site. Except for the anticipated increase in groundwater levels in the vicinity of the pipe and media drain after shutdown of the groundwater extraction system in August 2005, no significant changes in the groundwater flow conditions have been observed since system shutdown.

Surface Water

Surface water samples are collected annually from the confluence of the south and east (or “S&E”) ditches adjacent to the Site and analyzed for VOCs and SVOCs. Appendix E presents time-series concentration plots for VOCs detected in surface water since 1996. The results during this review period (2013 through 2017) were consistent with historical results and show that there are no significant impacts to surface water quality as the result of the Site.

Sediment

Sediment samples are collected annually from the confluence of the S&E ditches adjacent to the Site and analyzed for VOCs and SVOCs. Tables 10a through 10e shows the sediment sampling results for the 2013 through 2017 sampling events. The results show that several polycyclic aromatic hydrocarbons (PAHs) were detected at or above their respective PQLs. Detections of PAHs in the sediment samples are attributed to past coal mining activities in the area. The data demonstrate no significant impacts to sediment quality as a result of the Site.

Site Inspection

The inspection of the Site was conducted on 6/21/2018. In attendance were EPA RPM Pablo N. Valentin, Ohio EPA project manager Regan Williams, PRP Project Coordinator Mike Gibson with Eagon, Inc, Alternate PRP Project Coordinator Andrew Graham with Eagon, Inc, and On-Site O&M Staff David Miller with D&M Consultants representing the PRPs. The purpose of the inspection was to assess the protectiveness of the remedy.

Pablo N. Valentin and Regan Williams met with the PRP representatives at the Site to conduct the inspection. The site inspection began with an interview of the PRP representatives. The results of the interview are incorporated into this FYR report and also are reflected in the Site Inspection Checklist in Appendix F. The inspection covered the entire Site, including the inactive groundwater treatment plant, the Site offices and computer facilities, the Site perimeter and fence, the monitoring wells, the pipe and media drain and wet well, the east and south drainage ditches, and the treatment plant effluent discharge point. Photographs were taken of current Site conditions and are included as Appendix F.

No significant issues were identified regarding the groundwater treatment system, the hydraulic containment system, the Site cover, or the building. Mike Gibson of Eagon, Inc, indicated that when they took over the project from the previous PRP contractor, the groundwater treatment system, which is not in use, was moth-balled for proper maintenance. As noted earlier in this FYR, the groundwater collection and treatment system has been shut down since August 2005 to evaluate whether the groundwater plume remains stable without operating the system. Based on the groundwater monitoring data collected so far during the shutdown period, there is no evidence that groundwater contamination is moving away from the Site. Mike Gibson indicated that there have been some instances where locks from monitoring wells on the eastern side of the property have been broken. He said that these incidents are addressed immediately since weekly inspections take place at the Site, and whenever a lock is found to be damaged it is replaced.

During the Site inspection, EPA and Ohio EPA noted that the monitoring well identification on the labels is barely legible, and recommended that new permanent labels be placed on each of the wells in the monitoring well network.

No complaints from nearby residents have been received by On-Site O&M staff, Ohio EPA, or EPA. Additionally, based on the Site inspection and interviews, there are no Site or media uses occurring which are incompatible with the stated objectives of the ICs.

V. TECHNICAL ASSESSMENT

QUESTION A: Is the remedy functioning as intended by the decision documents?

Yes. Based on a review of relevant Site documents, environmental data, risk assumptions, and the results of the site inspection, the remedy appears to be functioning as intended by the decision documents (1988 ROD, 1990 ROD amendment, and 1992 ESD) and is expected to continue to do so.

Remedial Action Performance

The contamination remaining on-site is in soil and groundwater. The remaining contaminants in soil and groundwater are effectively contained by the remedy and are gradually being reduced. Contaminated

soils are covered with 2.5 feet of clean soil and also by a vegetative cover, and the Site is entirely fenced. Contaminated groundwater was effectively contained within the Site boundaries by the pipe and media drain groundwater collection system during its operation (1995-2005) and also by the low permeability of the hydrogeologic units, and groundwater contamination has not migrated off-site.

System Operations/O&M

The groundwater treatment plant consistently met the discharge limits established by Ohio EPA during its operation, and even though the groundwater collection and treatment system was shut down in 2005, contaminated groundwater has not migrated off-site.

Implementation of Institutional Controls

The required ICs have been implemented, in the form of an EC recorded on June 5, 2013, and there are no Site or media uses occurring which are incompatible with the stated objectives of the ICs.

QUESTION B: Are the exposure assumptions, toxicity data, cleanup levels, and RAOs used at the time of the remedy selection still valid?

No. The original exposure assumptions and RAOs are still valid, but there have been some changes to toxicity factors and cancer slope factors since the time the remedy was selected, as discussed below. These changes do not affect the protectiveness of the remedy.

Changes in Toxicity and Other Contaminant Characteristics

The toxicity values that are the basis for the risk-based groundwater performance standards that are part of the selected remedy have changed over the years, with some having increased and some having decreased. If calculated today based on current toxicity values, the performance standards for benzene, 1,2-dichloroethane, PCE, TCE and vinyl chloride would likely become more stringent compared to the standards in the remedy selection decision documents, while the standard for chloroethane would likely become less stringent. At this time, however, there does not appear to be any reason to revise the performance standards for the Site.

Expected Progress Towards Meeting RAOs

Current groundwater contaminant concentrations within the Site boundaries are still well above the groundwater performance standards, and it appears that it will be many years before the concentrations will fall below those standards.

QUESTION C: Has any other information come to light that could call into question the protectiveness of the remedy?

No. No new information has come to light that could call into question the protectiveness of the remedy.

VI. ISSUES/RECOMMENDATIONS

No issues or recommendations that affect the protectiveness of the remedy were identified during this FYR.

OTHER FINDINGS

The following recommendation was identified during the Site inspection that may improve management of O&M at the Site but does not affect current nor future protectiveness:

- Create new permanent labels to identify the monitoring wells; the current label identifications on the monitoring wells are barely legible.

VII. PROTECTIVENESS STATEMENT

Protectiveness Statement(s)	
<i>Operable Unit:</i> 1 / Sitewide	<i>Protectiveness Determination:</i> Protective
<i>Protectiveness Statement:</i> The remedy at the Summit National Superfund Site is protective of human health and the environment. Exposure pathways to contaminated groundwater are being controlled and exposure to contaminated soil at the Site has been addressed by incinerating the most heavily-contaminated soils, sending several hundred drums of waste off-site for disposal, applying a clean soil cover and a vegetative cover over remaining soil contamination, and by fencing that surrounds the Site. All required ICs have been implemented, with an EC under the Ohio UECA recorded on June 5, 2013. Long-term stewardship procedures are in place, and compliance with effective ICs is being ensured through long-term stewardship by maintaining, monitoring, and enforcing effective ICs.	

VIII. NEXT REVIEW

The next FYR report for the Summit National Superfund Site is required within five years from the signature date of this review.

FIGURES

Figure 1 – Summit National Site Location

Figure 2 – Site Map

Figure 3 – Summary of SSIPL VOC results for the WTU

Figure 4 - Summary of SSIPL VOC results for the UIU

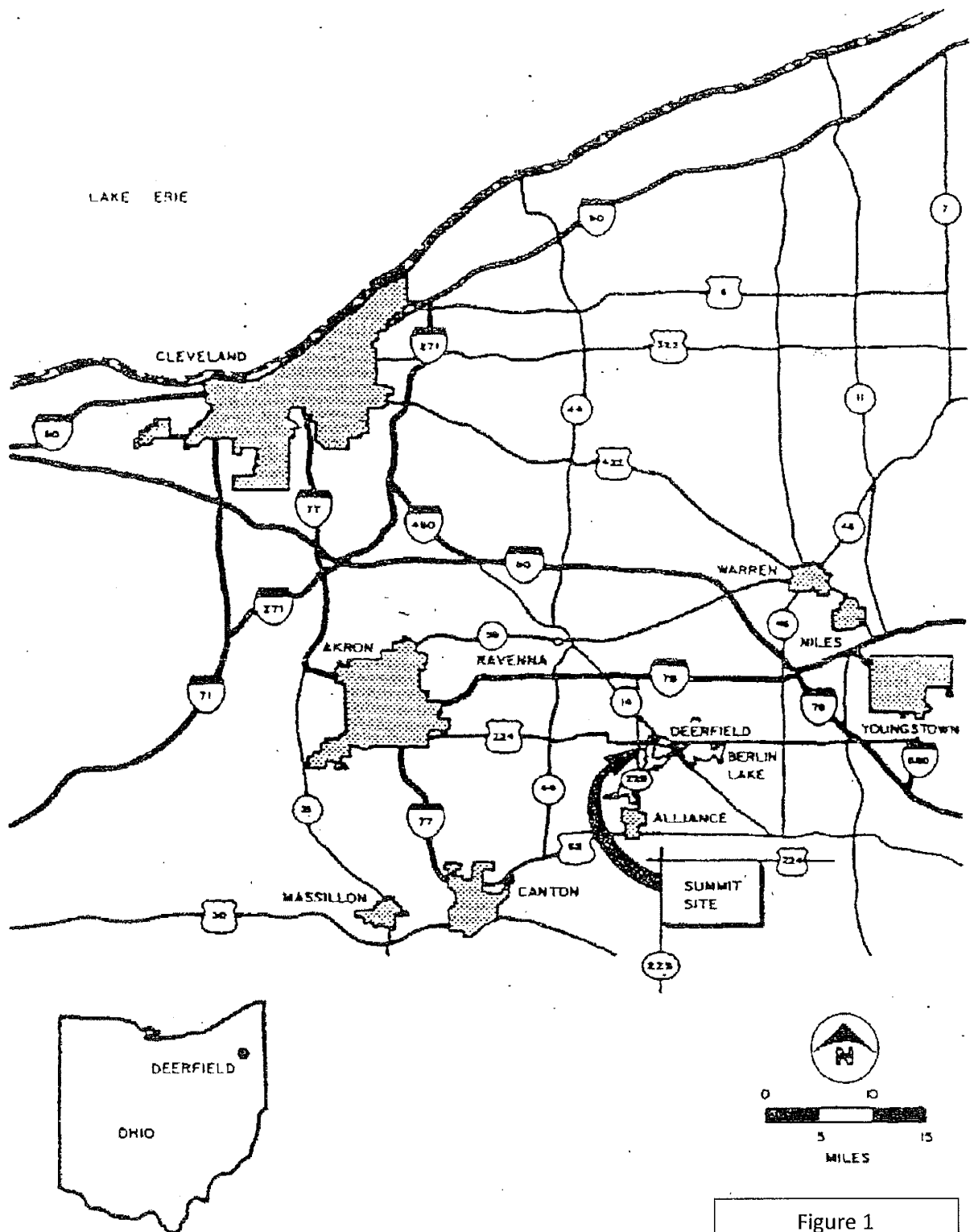
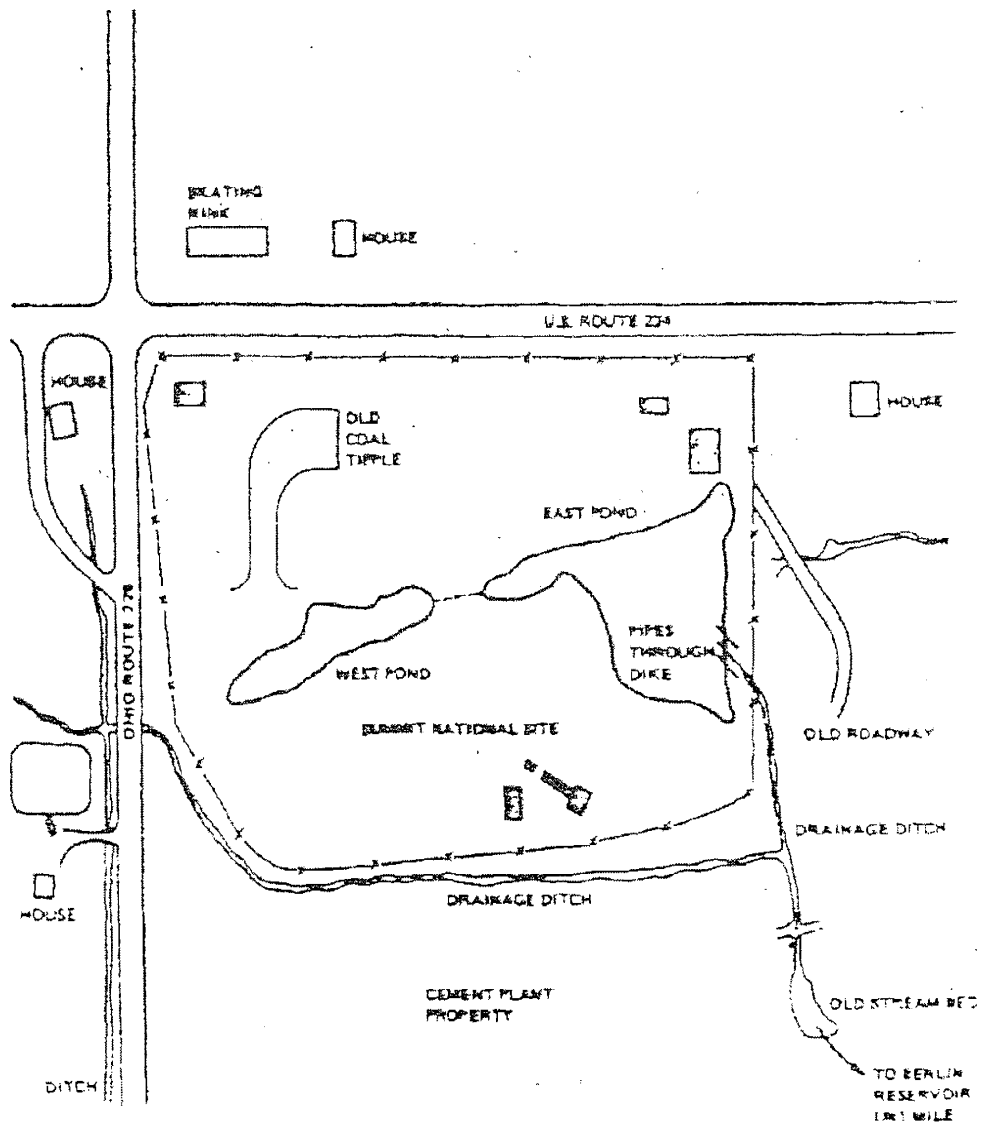

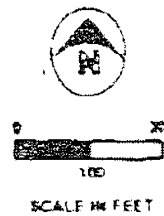


Figure 1
Summit National Site
Location



LEGEND
 ABANDONED STRUCTURES



NOTE: ALL LOCATIONS OF STRUCTURES
 AND PHYSICAL FEATURES APPROXIMATE.

Figure 2
 Site Map

TABLES

Tables 8a through 8e – Water Quality Data Summary, 2013 through 2017 Ground-Water Monitoring Wells Summit National Superfund Site

Tables 9a through 9e – Comparison of VOC Detections with MCLs Water Table Sentinel Wells 2013 through 2017 Ground-Water Monitoring Event Summit National Superfund Site

Tables 10a through 10e – Sediment Data Summary, 2013 through 2017 Sediment Summit National Superfund Site

Table 8a

WATER-QUALITY DATA SUMMARY, APRIL 2013
GROUND-WATER MONITORING WELLS
SUMMIT NATIONAL SUPERFUND SITE

A summary comparison of changes from the 2012 groundwater monitoring results for detected volatile organic compounds (VOCs) in the on-Site WTU wells in 2013 is provided below.

Well ID	Parameters	2012	2013	MCL (µg/L)
MW-11	1,1,1-Trichloroethane	24.4	28.0	200
	1,1-Dichloroethane	63.3	77.7	-
	1,2-Dichloroethane	1.3	1.5	5
	Benzene	0.55 J	0.70 J	5
	cis-1,2-Dichloroethene	44.2	57.5	70
	trans-1,2-Dichloroethene	1.6	2.1	100
	Trichloroethene	75.6	88.9	5
	Vinyl Chloride	4.1	6.2	2
MW-107	1,1,1-Trichloroethane	57.1	33.0	200
	1,1-Dichloroethane	1610	1340	-
	1,2-Dichloroethane	210	137	5
	Benzene	89.1	90.9	5
	Chlorobenzene	51.9	55.1	100
	cis-1,2-Dichloroethene	208	104	70

Well ID	Parameters	2012	2013	MCL (µg/L)
MW-107 <i>cont'd</i>	Ethylbenzene	907	1030	700
	Toluene	1510	2690	1,000
	Trichloroethene	5.1	4.2 J	5
	Vinyl Chloride	142	97.8	2
	Xylenes, Total	3320	3390	10,000
MW-108	1,1,1-Trichloroethane	6.1	5.0/5.3	200
	1,1-Dichloroethane	329	299/309	-
	1,2-Dichloroethane	68.5	67.1/67.6	5
	Benzene	120	126/126	5
	cis-1,2-Dichloroethene	199	201/208	70
	Ethylbenzene	0.81 J	0.50 J/0.45 J	700
	Toluene	1.1	1.0/0.97 J	1,000
	trans-1,2-Dichloroethene	5.8	5.9/6.0	100
	Trichloroethene	31.0	27.8/27.8	5
	Vinyl Chloride	119	115/117	2
	Xylenes, Total	0.32 J	0.39 J/0.25 J	10,000
MW-111	1,1-Dichloroethane	32.2	32.9	-
	1,2-Dichloroethane	73.7	96.4	5
	Chloroethane	1.2	1.7	-
	cis-1,2-Dichloroethene	6.3	7.1	70
	Vinyl Chloride	6.2	6.5	2

Note: "J" indicates an estimated result below the reporting limit

Table 8a
Continued

WATER-QUALITY DATA SUMMARY, APRIL 2013
GROUND-WATER MONITORING WELLS
SUMMIT NATIONAL SUPERFUND SITE

WTU Trends - Off-Site Wells (MW-4, MW-114, MW-115)

Well ID	Parameters	2012	2013	MCL (µg/L)
MW-115	1,1-Dichloroethane	2.0	2.1	-
	1,2-Dichloroethane	ND (1.0)	0.60 J	5
	cis-1,2-Dichloroethene	7.4	10.1	70
	trans-1,2-Dichloroethene	ND (1.0)	0.31 J	100

Note: "J" indicates an estimated result below the reporting limit

UIU Trends - On-Site Wells (MW-207, W-224)

No SSIPL compounds were detected in the on-Site UIU wells sampled in 2013, which is consistent with the four previous sampling events

UIU Trends - Off-Site Wells (MW-209, W-220)

Well ID	Parameters	2012	2013	MCL (µg/L)
MW-209	Acetone	ND (5.0)	12.8	-

Table 8b
WTU 1 of 3

WATER-QUALITY DATA SUMMARY, MAY 2014
GROUND-WATER MONITORING WELLS
SUMMIT NATIONAL SUPERFUND SITE

Parameter	MW-4 5/7/2014 Result	MW-11 5/9/2014 Result	MW-101 5/7/2014 Result	MW-102 5/6/2014 Result	MW-103 5/7/2014 Result	MW-104 5/7/2014 Result	MW-105 5/9/2014 Result	MW-106 5/7/2014 Result	MW-107 5/9/2014 Result	MW-108 5/9/2014 Result	MW-109 5/6/2014 Result	MW-110 5/6/2014 Result	MW-111 5/9/2014 Result	MW-113 5/9/2014 Result	MW-114 5/7/2014 Result	MW-115 5/7/2014 Result	MW-116 5/7/2014 Result	MW-117 5/8/2014 Result	MW-118 5/6/2014 Result
1,1,1-Trichloroethane	<1	17.6	<1	<1	<1	<1	<1	4.1	19.5	4.3	<1	<1	1.4	<1	<1	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	<1	<1	<1	<1	<1	<1	<1	<1	<10	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1,2-Trichloroethane	<1	<1	<1	<1	<1	<1	<1	<1	7.9	70.33	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethane	<1	54.4	<1	<1	<1	<1	<1	3.3	1330	315	<1	<1	29.2	<1	<1	1.1	<1	<1	<1
1,1-Dichloroethane	<1	70.85	<1	<1	<1	<1	<1	<1	<10	3.7	<1	<1	70.46	<1	<1	<1	<1	<1	<1
1,2,4-Trichlorobenzene	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-Dichlorobenzene	<1	<1	<1	<1	<1	<1	<1	<1	1.5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-Dichloroethane	<1	1.1	<1	<1	<1	<1	<1	2.4	72.8	75.1	<1	<1	112	<1	<1	<1	<1	<1	1.8
1,2-Dichloroethane [total]	<1	34.2	<1	<1	<1	<1	<1	<1	43.7	215	<1	<1	6.1	<1	<1	2.5	<1	<1	<1
1,2-Dichloropropane	<1	<1	<1	<1	<1	<1	<1	<1	<10	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,3-Dichlorobenzene	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,4-Dichlorobenzene	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
2,2'-Oxybis[1-chloropropane] [bis(2-chloropropyl) ether]	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
2,4,5-Trichlorophenol	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
2,4,6-Trichlorophenol	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
2,4-Dichlorophenol	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
2,4-Dimethylphenol	<5	<5	<5	<5	<5	<5	<5	<5	12.8	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
2,4-Dinitrophenol	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20
2,4-Dinitrotoluene	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
2,6-Dinitrotoluene	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
3-Butanone [Methyl ethyl ketone] [MEK]	<5	<5	<5	<5	<5	<5	<5	<5	<50	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
2-Chloronaphthalene	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
2-Chlorophenol	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
2-Hexanone	<5	<5	<5	<5	<5	<5	<5	<5	<50	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
2-Methylnaphthalene	<1	<1	<1	<1	<1	<1	<1	<1	2	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
2-Methylphenol	<2	<2	<2	<2	<2	<2	<2	<2	18	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
2-Nitroaniline	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
2-Nitrophenol	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
3,4-Methylphenol	<2	<2	<2	<2	<2	<2	<2	<2	5	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
3,3'-Dichlorobenzidine	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
3-Nitroaniline	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
4,6-Dinitro-2-methylphenol	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20
4-Bromophenyl phenyl ether	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
4-Chloro-3-methylphenol	<5	<5	<5	<5	<5	<5	<5	<5	10.2	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
4-Chloroaniline	<5	<5	<5	<5	<5	<5	<5	<5	<5	71.4	<5	<5	<5	<5	<5	<5	<5	<5	<5
4-Chlorophenyl phenyl ether	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
4-Methyl-2-pentanone [Methyl isobutyl ketone] [MIBK]	<5	<5	<5	<5	<5	<5	<5	<5	<50	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
4-Nitroaniline	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
4-Nitrophenol	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Acenaphthene	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Acenaphthylene	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Acetone	<5	<5	<5	<5	<5	<5	<5	<5	<50	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Aluminum	240	<200	<200	1800	320	<200	600	<200	<200	<200	980	1100	410	360	<200	<200	900	<200	<200

All results in ug/L

Table 8b
WTU 2 of 3

WATER-QUALITY DATA SUMMARY, MAY 2014
GROUND-WATER MONITORING WELLS
SUMMIT NATIONAL SUPERFUND SITE

Parameter	MW-4 5/7/2014 Result	MW-11 5/9/2014 Result	MW-101 5/7/2014 Result	MW-102 5/6/2014 Result	MW-103 5/7/2014 Result	MW-104 5/7/2014 Result	MW-105 5/9/2014 Result	MW-106 5/7/2014 Result	MW-107 5/9/2014 Result	MW-108 5/9/2014 Result	MW-109 5/6/2014 Result	MW-110 5/6/2014 Result	MW-111 5/9/2014 Result	MW-113 5/9/2014 Result	MW-114 5/7/2014 Result	MW-115 5/7/2014 Result	MW-116 5/7/2014 Result	MW-117 5/8/2014 Result	MW-118 5/6/2014 Result
Antimony	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Antimony	<6	<2.5	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<2.5	<2.5	<6	<6	<6	<6	<6
Arsenic	<2.5	<3	26	5.8	30	11	18	4.2	48	13	<2.5	3.8	31	3.4	65	12	37	<30	<2.5
Barium	<200	<200	<200	<200	<200	<200	<200	<200	570	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200
Benzene	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	94.9	136	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)anthracene	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Benzo(a)pyrene	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Benzo(b)fluoranthene	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Benzo(g,h,i)perylene	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Benzo(k)fluoranthene	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Beryllium	<1	<1	<1	<1	<1	<1	1.6	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
bis(2-Chloroethoxy)methane	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
bis(2-Chloroethyl)ether	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
bis(2-Ethylhexyl)phthalate (DEHP)	<2	7 0.69	<2	<2	<2	<2	<2	<2	7 0.61	<2	4.3	<2	<2	<2	<2	<2	<2	<2	<2
Bromodichloromethane	<1	<1	<1	<1	<1	<1	<1	<1	<10	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bromoform	<2	<2	<2	<2	<2	<2	<2	<2	<20	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
Bromomethane (Methyl bromide)	<2	<2	<2	<2	<2	<2	<2	<2	<20	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
Buryl benzylphthalate (BBP)	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
Cadmium	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	3.6	<3	<3	<3	<3	<3	<3	<3	<3
Calcium	406000	362000	301000	193000	273000	288000	302000	354000	218000	193000	372000	93100	506000	417000	428000	262000	442000	433000	261000
Carbazole	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Carbon disulfide	<2	<2	<2	<2	<2	<2	<2	<2	<20	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
Carbon tetrachloride	<1	<1	<1	<1	<1	<1	<1	<1	<10	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chlorobenzene	<1	<1	<1	<1	<1	<1	<1	<1	58.3	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloroethane	<1	<1	<1	<1	<1	<1	<1	<1	10.8	<1	<1	<1	1.7	<1	<1	<1	<1	<1	<1
Chloroform (Trichloromethane)	<1	<1	<1	<1	<1	<1	<1	<1	<10	7 0.37	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloromethane (Methyl chloride)	<1	<1	<1	<1	<1	<1	<1	<1	<10	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chromium	<10	<10	<10	<10	<10	<10	12	<10	<10	<10	<10	<10	<10	<10	<10	<10	14	24	12
Chrysene	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
cis-1,2-Dichloroethane	<1	33.3	<1	<1	<1	<1	<1	<1	43.7	210	<1	<1	6.1	<1	<1	2.5	<1	<1	<1
cis-1,3-Dichloropropene	<1	<1	<1	<1	<1	<1	<1	<1	<10	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Cobalt	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
Copper	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Cyanide	<10	13	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Dibenz(a,h)anthracene	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Dibenzofuran	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Dibromochloromethane	<1	<1	<1	<1	<1	<1	<1	<1	<10	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Diethyl phthalate	<2	<2	<2	<2	<2	<2	<2	<2	3.4	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
Dimethyl phthalate	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
Di-n-butylphthalate (DBP)	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
Di-n-octyl phthalate (DuOP)	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
Ethylbenzene	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1150	7 0.41	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Fluoranthene	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1

All results in ug/L

Table 8b
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WATER-QUALITY DATA SUMMARY, MAY 2014
GROUND-WATER MONITORING WELLS
SUMMIT NATIONAL SUPERFUND SITE

Parameter	MW-4 5/7/2014 Result	MW-11 5/9/2014 Result	MW-101 5/7/2014 Result	MW-102 5/6/2014 Result	MW-103 5/7/2014 Result	MW-104 5/7/2014 Result	MW-105 5/9/2014 Result	MW-106 5/7/2014 Result	MW-107 5/9/2014 Result	MW-108 5/9/2014 Result	MW-109 5/6/2014 Result	MW-110 5/6/2014 Result	MW-111 5/9/2014 Result	MW-113 5/9/2014 Result	MW-114 5/7/2014 Result	MW-115 5/7/2014 Result	MW-116 5/7/2014 Result	MW-117 5/6/2014 Result	MW-118 5/6/2014 Result
Fluorene	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Hexachlorobenzene	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Hexachlorobutadiene	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Hexachlorocyclopentadiene	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Hexachloroethane	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
Indeno[1,2,3-cd]pyrene	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Iron	2100	8900	35600	95500	30000	21700	88200	147000	490	22900	5400	5700	213000	2500	89200	11200	3700	17000	7200
Isophorone	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
Lead	<2.5	<2.5	<2.5	2.6	<2.5	<2.5	<2.5	<2.5	3	<2.5	<2.5	3.1	<2.5	<2.5	<2.5	<2.5	<2.5	<30	<2.5
Magnesium	234000	86000	157000	99100	74100	70200	111000	134000	111000	61400	193000	23700	165000	185000	27500	65000	540000	128000	104000
Manganese	1200	2100	5100	1500	5000	2700	4800	5800	530	1500	4100	370	3900	4000	1500	1300	1200	5300	3900
Mercury	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Methylene chloride	<2	<2	<2	<2	<2	<2	<2	<20	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
Naphthalene	<1	<1	<1	<1	<1	<1	<1	9.8	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Nickel	<10	<10	84	67	<10	<10	32	17	13	13	62	<10	20	23	36	<10	12	56	24
Nitrobenzene	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
N-Nitrosodi-n-propylamine	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
N-Nitrosodiphenylamine	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Pentachlorophenol	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Phenanthrene	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Phenol	<2	<2	<2	<2	<2	<2	<2	6.4	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
Potassium	<10000	<10000	<10000	<10000	<10000	<10000	<10000	<10000	<10000	<10000	<10000	<10000	<10000	<10000	25000	<10000	12700	12900	<10000
Pyrene	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Selenium	<10	<2.5	<10	<10	<10	<10	10	<10	<10	<10	<10	<10	<2.5	<2.5	<10	<10	<2.5	<10	<10
Silver	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Sodium	16700	52100	38300	28300	35700	794000	213000	44300	183000	119000	<10000	<10000	92300	133000	123000	74300	199000	53000	74000
Styrene	<2	<2	<2	<2	<2	<2	<2	<20	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
Tetrachloroethane	<1	<1	<1	<1	<1	<1	<1	<10	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Thallium	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<20	<20	<2
Toluene	<1	<1	<1	<1	<1	<1	<1	3440	1.1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene	<1	7.0.88	<1	<1	<1	<1	<1	<10	5.4	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
trans-1,3-Dichloropropene	<1	<1	<1	<1	<1	<1	<1	<10	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	<1	36.9	<1	<1	<1	<1	<1	<10	27.8	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Vanadium	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
Vinyl chloride	<1	2.8	<1	<1	<1	<1	<1	46.8	130	<1	<1	<1	6	<1	<1	<1	<1	<1	<1
Xylenes (total)	<1	<1	<1	<1	<1	<1	<1	3640	7.0.36	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Zinc	22	250	150	210	<20	<20	74	<20	44	<20	160	<20	<20	29	140	<20	<20	48	<20

All results in ug/L

Table 8b
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WATER-QUALITY DATA SUMMARY, MAY 2014
GROUND-WATER MONITORING WELLS
SUMMIT NATIONAL SUPERFUND SITE

Parameter	MW-201 5/6/2014 Result	MW-202 5/8/2014 Result	MW-203 5/9/2014 Result	MW-204 5/8/2014 Result	MW-205 5/7/2014 Result	MW-206 5/10/2014 Result	MW-207 5/9/2014 Result	MW-209 5/6/2014 Result	MW-219 5/8/2014 Result	MW-220 5/6/2014 Result	MW-223 5/9/2014 Result	MW-224 5/9/2014 Result
1,1,1-Trichloroethane	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,1,2,2-Tetrachloroethane	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,1,2-Trichloroethane	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,1-Dichloroethane	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	1.7	< 1
1,1-Dichloroethene	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,2,4-Trichlorobenzene	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,2-Dichlorobenzene	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,2-Dichloroethane	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	3.7	< 1
1,2-Dichloroethene [total]	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	1.8	< 1
1,2-Dichloropropane	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,3-Dichlorobenzene	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,4-Dichlorobenzene	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
2,2'-Oxybis[1-chloropropane] [bis(2-Chloroisopropyl) ether]	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
2,4,5-Trichlorophenol	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
2,4,6-Trichlorophenol	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
2,4-Dichlorophenol	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
2,4-Dimethylphenol	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
2,4-Dinitrophenol	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20
2,4-Dinitrotoluene	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
2,6-Dinitrotoluene	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
2-Butanone [Methyl ethyl ketone] [MEK]	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
2-Chloronaphthalene	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
2-Chlorophenol	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
2-Hexanone	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
2-Methylnaphthalene	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
2-Methylphenol	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
2-Nitroaniline	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
2-Nitrophenol	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
3&4-Methylphenol	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
3,3'-Dichlorobenzidine	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
3-Nitroaniline	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
4,6-Dinitro-2-methylphenol	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20
4-Bromophenyl phenyl ether	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
4-Chloro-3-methylphenol	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
4-Chloroaniline	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	J 1
4-Chlorophenyl phenyl ether	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
4-Methyl-2-pentanone [Methyl isobutyl ketone] [MIBK]	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
4-Nitroaniline	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
4-Nitrophenol	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Acenaphthene	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Acenaphthylene	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Acetone	< 5	< 5	< 5	< 5	< 5	< 5	< 5	10	< 5	< 5	< 5	< 5
Aluminum	< 200	< 200	< 200	< 200	< 200	10100	< 200	400	< 200	< 200	< 200	< 200

All results in ug/L

Table 8b
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WATER-QUALITY DATA SUMMARY, MAY 2014
GROUND-WATER MONITORING WELLS
SUMMIT NATIONAL SUPERFUND SITE

Parameter	M/W-201 5/6/2014 Result	M/W-202 5/8/2014 Result	M/W-203 5/9/2014 Result	M/W-204 5/8/2014 Result	M/W-205 5/7/2014 Result	M/W-206 5/10/2014 Result	M/W-207 5/9/2014 Result	M/W-209 5/6/2014 Result	M/W-219 5/8/2014 Result	M/W-220 5/6/2014 Result	M/W-223 5/9/2014 Result	M/W-224 5/9/2014 Result
Anthracene	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Antimony	< 6	< 6	< 6	< 6	< 6	< 6	< 2.5	< 6	< 6	< 6	< 2.5	< 2.5
Arsenic	< 2.5	11	< 2.5	< 2.5	< 2.5	5.7	< 3	17	< 2.5	< 2.5	< 3	< 3
Barium	< 200	< 200	< 200	< 200	< 200	< 200	< 200	< 200	< 200	< 200	< 200	< 200
Benzene	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Benzo[a]anthracene	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Benzo[a]pyrene	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Benzo[b]fluoranthene	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Benzo[g,h,i]perylene	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Benzo[k]fluoranthene	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Beryllium	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
bis[2-Chloroethoxy]methane	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
bis[2-Chloroethyl]ether	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
bis[2-Ethylhexyl]phthalate [DEHP]	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	3.3	J 0.75	< 2
Bromodichloromethane	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Bromoform	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
Bromomethane [Methyl bromide]	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
Buryl benzylphthalate [BBP]	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
Cadmium	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3
Calcium	89200	10900	7600	245000	208000	21600	360000	245000	6100	277000	391000	139000
Carbazole	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Carbon disulfide	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
Carbon tetrachloride	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Chlorobenzene	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Chloroethane	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Chloroform [Trichloromethane]	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Chloromethane [Methyl chloride]	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Chromium	< 10	12	< 10	< 10	17	39	10	< 10	< 10	11	< 10	< 10
Chrysene	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
cis-1,2-Dichloroethene	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	1.8	< 1
cis-1,3-Dichloropropene	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Cobalt	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50
Copper	< 10	< 10	< 10	< 10	< 10	38	< 10	< 10	< 10	< 10	< 10	< 10
Cyanide	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Dibenz[a,h]anthracene	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Dibenzofuran	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Dibromochloromethane	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Diethyl phthalate	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
Dimethyl phthalate	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
Di-n-butylphthalate [DBP]	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
Di-n-octyl phthalate [DuOP]	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
Ethylbenzene	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Fluoranthene	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1

All results in ug/L

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WATER-QUALITY DATA SUMMARY, MAY 2014
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Parameter	MW-201 5/6/2014 Result	MW-202 5/8/2014 Result	MW-203 5/9/2014 Result	MW-204 5/8/2014 Result	MW-205 5/7/2014 Result	MW-206 5/10/2014 Result	MW-207 5/9/2014 Result	MW-209 5/6/2014 Result	MW-219 5/8/2014 Result	MW-220 5/6/2014 Result	MW-223 5/9/2014 Result	MW-224 5/9/2014 Result
Fluorene	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Hexachlorobenzene	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Hexachlorobutadiene	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Hexachlorocyclopentadiene	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Hexachloroethane	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
Indeno[1,2,3-cd]pyrene	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Iron	1800	1500	330	3100	23400	27400	12500	16700	340	410	124000	2300
Isophorone	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
Lead	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5	22	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5	23
Magnesium	42000	6100	< 5000	107000	109000	9700	161000	123000	< 5000	72300	143000	52600
Manganese	99	24	< 15	310	910	540	1300	3200	< 15	130	7000	310
Mercury	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Methylene chloride	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
Naphthalene	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Nickel	< 10	10	< 10	11	13	38	< 10	< 10	< 10	< 10	14	< 10
Nitrobenzene	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
N-Nitrosodi-n-propylamine	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
N-Nitrosodiphenylamine	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Pentachlorophenol	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Phenanthrene	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Phenol	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
Potassium	< 10000	< 10000	< 10000	14300	10600	< 10000	18900	12400	< 10000	16700	15400	11600
Pyrene	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Selenium	< 10	< 10	< 10	< 10	< 10	11	< 2.5	< 10	< 2.5	< 10	< 2.5	< 2.5
Silver	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Sodium	821000	490000	669000	402000	102000	551000	176000	169000	515000	340000	198000	422000
Styrene	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
Tetrachloroethene	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Thallium	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
Toluene	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
trans-1,2-Dichloroethene	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
trans-1,3-Dichloropropene	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Trichloroethene	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Vanadium	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50
Vinyl chloride	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Xylenes [total]	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Zinc	< 20	58	< 20	< 20	< 20	74	< 20	< 20	< 20	47	< 20	49

All results in ug/L

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WATER-QUALITY DATA SUMMARY, MAY 2014
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Parameter	M/W-301 5/6/2014 Result	M/W-302 5/8/2014 Result	M/W-303 5/9/2014 Result	M/W-304 5/8/2014 Result	M/W-305 5/7/2014 Result	M/W-306 5/8/2014 Result	M/W-307 5/9/2014 Result	M/W-309 5/6/2014 Result	M/W-319 5/9/2014 Result	M/W-320 5/6/2014 Result	M/W-321 5/8/2014 Result	M/W-322 5/9/2014 Result	M/W-323 5/9/2014 Result	M/W-324 5/8/2014 Result
1,1,1-Trichloroethane	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1,2-Trichloroethane	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethane	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	0.37	<1	<1	<1
1,1-Dichloroethene	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2,4-Trichlorobenzene	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-Dichlorobenzene	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-Dichloroethane	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	1.3	<1	<1	<1
1,2-Dichloroethene [total]	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-Dichloropropane	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,3-Dichlorobenzene	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,4-Dichlorobenzene	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
2,2'-Oxybis[1-chloropropane] [bis(2-chloroisopropyl) ether]	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
2,4,5-Trichlorophenol	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
2,4,6-Trichlorophenol	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
2,4-Dichlorophenol	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
2,4-Dimethylphenol	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
2,4-Dinitrotoluene	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20
2,4-Dinitrotoluene	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
2,6-Dinitrotoluene	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
2-Butanone [Methyl ethyl ketone] [MEK]	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
2-Chloronaphthalene	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
2-Chlorophenol	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
2-Hexanone	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
2-Methylnaphthalene	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
2-Methylphenol	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
2-Nitroaniline	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
2-Nitrophenol	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
3,4-Methylphenol	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
3,3'-Dichlorobenzidine	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
3-Nitroaniline	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
4,6-Dinitro-2-methylphenol	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20
4-Bromophenyl phenyl ether	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
4-Chloro-3-methylphenol	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
4-Chloroaniline	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
4-Chlorophenyl phenyl ether	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
4-Methyl-2-pentanone [Methyl isobutyl ketone] [MIBK]	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
4-Nitroaniline	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
4-Nitrophenol	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Acenaphthene	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Acenaphthylene	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Acetone	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Aluminum	740	7100	<200	<200	<200	<200	980	<200	<230	<200	<200	<200	<200	<200

All results in ug/L

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WATER-QUALITY DATA SUMMARY, MAY 2014
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Parameter	M/W-301 5/6/2014 Result	M/W-302 5/8/2014 Result	M/W-303 5/9/2014 Result	M/W-304 5/8/2014 Result	M/W-305 5/7/2014 Result	M/W-306 5/8/2014 Result	M/W-307 5/9/2014 Result	M/W-309 5/6/2014 Result	M/W-319 5/9/2014 Result	M/W-320 5/6/2014 Result	M/W-321 5/8/2014 Result	M/W-322 5/9/2014 Result	M/W-323 5/9/2014 Result	M/W-324 5/8/2014 Result
Anthracene	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Antimony	<6	<6	<6	<6	<6	<6	<2.5	<6	<2.5	<6	<6	<6	<2.5	<6
Arsenic	<2.5	6.6	<2.5	18	<2.5	<1	<3	7.4	<3	<3	<2.5	<2.5	<3	<2.5
Barium	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200
Benzene	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo[a]anthracene	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Benzo[a]pyrene	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Benzo[b]fluoranthene	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Benzo[g,h,i]perylene	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Benzo[k]fluoranthene	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Beryllium	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
bis[2-Chloroethoxy]methane	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
bis[2-Chloroethyl]ether	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
bis[2-Ethylhexyl]phthalate (DEHP)	<2	<2	<2	<2	<2	<2	<2	<2	<2	11.8	<2	<2	<2	<2
Bromodichloromethane	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bromoform	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
Bromomethane [Methyl bromide]	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
Buryl benzylphthalate (BBP)	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
Cadmium	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3
Calcium	11300	<5000	29200	33700	91100	5200	6100	<5000	26700	<5000	8100	158000	<5000	95600
Carbazole	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Carbon disulfide	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
Carbon tetrachloride	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chlorobenzene	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloroethane	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloroform [Trichloromethane]	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloromethane [Methyl chloride]	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chromium	<10	21	<10	20	<10	<10	<10	10	<10	<10	<10	<10	<10	<10
Chrysene	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
cis-1,2-Dichloroethene	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
cis-1,3-Dichloropropene	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Cobalt	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
Copper	<10	14	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Cyanide	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Dibenz[a,h]anthracene	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Dibenzofuran	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Dibromochloromethane	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Diethyl phthalate	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
Dimethyl phthalate	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
Di-n-butylphthalate (DBP)	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
Di-n-octyl phthalate (DuOP)	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
Ethylbenzene	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Fluoranthene	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1

All results in ug/L

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WATER-QUALITY DATA SUMMARY, MAY 2014
GROUND-WATER MONITORING WELLS
SUMMIT NATIONAL SUPERFUND SITE

Parameter	MW-301 5/6/2014 Result	MW-302 5/8/2014 Result	MW-303 5/9/2014 Result	MW-304 5/8/2014 Result	MW-305 5/7/2014 Result	MW-306 5/8/2014 Result	MW-307 5/9/2014 Result	MW-309 5/6/2014 Result	MW-319 5/9/2014 Result	MW-320 5/6/2014 Result	MW-321 5/8/2014 Result	MW-322 5/9/2014 Result	MW-323 5/9/2014 Result	MW-324 5/8/2014 Result
Fluorene	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Hexachlorobenzene	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Hexachlorobutadiene	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Hexachlorocyclopentadiene	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Hexachloroethane	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
Indeno[1,2,3-cd]pyrene	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Iron	1700	13200	320	1200	5500	250	880	260	740	780	310	430	610	280
Isophorone	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
Lead	< 2.5	6.1	< 2.5	< 2.5	< 2.5	3.5	< 2.5	< 2.5	13	3.1	< 2.5	< 2.5	< 2.5	< 2.5
Magnesium	6400	< 5000	12900	17100	28100	< 5000	< 5000	< 5000	< 5000	< 5000	< 5000	73100	< 5000	38000
Manganese	21	340	29	53	460	< 15	17	< 15	< 15	23	24	97	19	38
Mercury	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Methylene chloride	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
Naphthalene	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Nickel	< 10	22	< 10	15	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Nitrobenzene	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
N-Nitrosodi-n-propylamine	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
N-Nitrosodiphenylamine	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Pentachlorophenol	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Phenanthrene	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Phenol	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
Potassium	< 10000	< 10000	< 10000	< 10000	< 10000	< 10000	< 10000	< 10000	< 10000	< 10000	< 10000	12300	< 10000	< 10000
Pyrene	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Selenium	< 10	< 10	< 10	< 10	< 10	< 1	< 10	< 10	< 10	< 10	< 2.5	< 10	< 50	< 2.5
Silver	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Sodium	620000	305000	769000	608000	546000	501000	595000	422000	576000	402000	579000	509000	605000	463000
Styrene	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
Tetrachloroethane	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Thallium	< 2.5	< 2	< 2	< 2	< 2	< 1	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
Toluene	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
trans-1,2-Dichloroethane	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
trans-1,3-Dichloropropene	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Trichloroethane	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Vanadium	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50
Vinyl chloride	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Xylenes [total]	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Zinc	< 20	30	< 20	< 20	< 20	< 20	< 20	37	< 20	< 20	< 20	< 20	< 20	< 20

All results in ug/L

Table 8b
USU 1 of 3

WATER-QUALITY DATA SUMMARY, MAY 2014
GROUND-WATER MONITORING WELLS
SUMMIT NATIONAL SUPERFUND SITE

Parameter	MW-401 5/8/2014 Result	MW-402 5/6/2014 Result	MW-414 5/7/2014 Result	MW-415 5/7/2014 Result	MW-421 5/8/2014 Result	MW-422 5/6/2014 Result	Non-Potable Well 5/6/2014 Result
1,1,1-Trichloroethane	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,1,2,2-Tetrachloroethane	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,1,2-Trichloroethane	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,1-Dichloroethane	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,1-Dichloroethene	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,2,4-Trichlorobenzene	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,2-Dichlorobenzene	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,2-Dichloroethane	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,2-Dichloroethene (total)	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,2-Dichloropropane	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,3-Dichlorobenzene	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,4-Dichlorobenzene	< 1	< 1	< 1	< 1	< 1	< 1	< 1
2,2'-Oxybis[1-chloropropane] [bis(2-chloroisopropyl) ether]	< 2	< 2	< 2	< 2	< 2	< 2	< 2
2,4,5-Trichlorophenol	< 5	< 5	< 5	< 5	< 5	< 5	< 5
2,4,6-Trichlorophenol	< 5	< 5	< 5	< 5	< 5	< 5	< 5
2,4-Dichlorophenol	< 2	< 2	< 2	< 2	< 2	< 2	< 2
2,4-Dimethylphenol	< 5	< 5	< 5	< 5	< 5	< 5	< 5
2,4-Dinitrophenol	< 20	< 20	< 20	< 20	< 20	< 20	< 20
2,4-Dinitrotoluene	< 1	< 1	< 1	< 1	< 1	< 1	< 1
2,6-Dinitrotoluene	< 1	< 1	< 1	< 1	< 1	< 1	< 1
2-Butanone [Methyl ethyl ketone] [MEK]	< 5	< 5	< 5	< 5	< 5	< 5	< 5
2-Chloronaphthalene	< 2	< 2	< 2	< 2	< 2	< 2	< 2
2-Chlorophenol	< 5	< 5	< 5	< 5	< 5	< 5	< 5
2-Hexanone	< 5	< 5	< 5	< 5	< 5	< 5	< 5
2-Methylnaphthalene	< 1	< 1	< 1	< 1	< 1	< 1	< 1
2-Methylphenol	< 2	< 2	< 2	< 2	< 2	< 2	< 2
2-Nitroaniline	< 5	< 5	< 5	< 5	< 5	< 5	< 5
2-Nitrophenol	< 5	< 5	< 5	< 5	< 5	< 5	< 5
3,4-Methylphenol	< 2	< 2	< 2	< 2	< 2	< 2	< 2
3,3'-Dichlorobenzidine	< 2	< 2	< 2	< 2	< 2	< 2	< 2
3-Nitroaniline	< 5	< 5	< 5	< 5	< 5	< 5	< 5
4,6-Dinitro-2-methylphenol	< 20	< 20	< 20	< 20	< 20	< 20	< 20
4-Bromophenyl phenyl ether	< 2	< 2	< 2	< 2	< 2	< 2	< 2
4-Chloro-3-methylphenol	< 5	< 5	< 5	< 5	< 5	< 5	< 5
4-Chloroaniline	< 5	< 5	< 5	< 5	< 5	< 5	< 5
4-Chlorophenyl phenyl ether	< 2	< 2	< 2	< 2	< 2	< 2	< 2
4-Methyl-2-pentanone [Methyl isobutyl ketone] [MIBK]	< 5	< 5	< 5	< 5	< 5	< 5	< 5
4-Nitroaniline	< 5	< 5	< 5	< 5	< 5	< 5	< 5
4-Nitrophenol	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Acenaphthene	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Acenaphthylene	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Acetone	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Aluminum	< 200	1600	250	< 200	< 200	< 200	< 200

All results in ug/L

Table 8b
USU 2 of 3

WATER-QUALITY DATA SUMMARY, MAY 2014
GROUND-WATER MONITORING WELLS
SUMMIT NATIONAL SUPERFUND SITE

Parameter	MW-401 5/8/2014 Result	MW-402 5/6/2014 Result	MW-414 5/7/2014 Result	MW-415 5/7/2014 Result	MW-421 5/8/2014 Result	MW-422 5/6/2014 Result	Non-Potable Well 5/6/2014 Result
Anthracene	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Antimony	< 6	< 6	< 6	< 6	< 6	< 6	< 6
Arsenic	< 3	4.4	< 2.5	6.9	< 3	< 2.5	< 3
Barium	< 200	< 200	< 200	< 200	< 200	< 200	< 200
Benzene	< 0.5	0.77	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Benzo[a]anthracene	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Benzo[a]pyrene	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Benzo[b]fluoranthene	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Benzo[g,h,i]perylene	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Benzo[k]fluoranthene	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Beryllium	< 1	< 1	< 1	< 1	< 1	< 1	< 1
bis[2-Chloroethoxy]methane	< 2	< 2	< 2	< 2	< 2	< 2	< 2
bis[2-Chloroethyl]ether	< 2	< 2	< 2	< 2	< 2	< 2	< 2
bis[2-Ethylhexyl]phthalate [DEHP]	< 2	7.1	< 2	< 2	< 2	< 2	< 2
Bromodichloromethane	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Bromoform	< 2	< 2	< 2	< 2	< 2	< 2	< 2
Bromomethane [Methyl bromide]	< 2	< 2	< 2	< 2	< 2	< 2	< 2
Buryl benzylphthalate [BBP]	< 2	< 2	< 2	< 2	< 2	< 2	< 2
Cadmium	< 3	< 3	< 3	< 3	< 3	< 3	< 3
Calcium	< 5000	< 5000	< 5000	< 5000	5100	9900	< 5000
Carbazole	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Carbon disulfide	< 2	< 2	< 2	< 2	70.69	< 2	< 2
Carbon tetrachloride	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Chlorobenzene	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Chloroethane	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Chloroform [Trichloromethane]	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Chloromethane [Methyl chloride]	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Chromium	< 10	13	< 10	< 10	< 10	< 10	< 10
Chrysene	< 1	< 1	< 1	< 1	< 1	< 1	< 1
cis-1,2-Dichloroethane	< 1	< 1	< 1	< 1	< 1	< 1	< 1
cis-1,3-Dichloropropene	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Cobalt	< 50	< 50	< 50	< 50	< 50	< 50	< 50
Copper	< 10	24	< 10	< 10	11	< 10	14
Cyanide	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Dibenz[a,h]anthracene	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Dibenzofuran	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Dibromochloromethane	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Diethyl phthalate	< 2	< 2	< 2	< 2	< 2	< 2	< 2
Dimethyl phthalate	< 2	< 2	< 2	< 2	< 2	< 2	< 2
Di-n-burylphthalate [DBP]	< 2	< 2	< 2	< 2	< 2	< 2	< 2
Di-n-octyl phthalate [DnOP]	< 2	< 2	< 2	< 2	< 2	< 2	< 2
Ethylbenzene	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Fluoranthene	< 1	< 1	< 1	< 1	< 1	< 1	< 1

All results in ug/L

Table 8b
USU 3 of 3

WATER-QUALITY DATA SUMMARY, MAY 2014
GROUND-WATER MONITORING WELLS
SUMMIT NATIONAL SUPERFUND SITE

Parameter	MfW-401 5/8/2014 Result	MfW-402 5/6/2014 Result	MfW-414 5/7/2014 Result	MfW-415 5/7/2014 Result	MfW-421 5/8/2014 Result	MfW-422 5/6/2014 Result	Non-Potable Well 5/6/2014 Result
Fluorene	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Hexachlorobenzene	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Hexachlorobutadiene	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Hexachlorocyclopentadiene	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Hexachloroethane	< 2	< 2	< 2	< 2	< 2	< 2	< 2
Indeno[1,2,3-cd]pyrene	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Iron	4600	32500	13500	2400	4100	12200	130
Isophorone	< 2	< 2	< 2	< 2	< 2	< 2	< 2
Lead	< 3	8.6	< 2.5	< 2.5	< 3	< 2.5	4
Magnesium	< 5000	< 5000	< 5000	< 5000	< 5000	< 5000	< 5000
Manganese	29	190	120	18	72	160	< 15
Mercury	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Methylene chloride	< 2	< 2	< 2	< 2	< 2	< 2	< 2
Naphthalene	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Nickel	< 10	39	< 10	< 10	< 10	10	< 10
Nitrobenzene	< 2	< 2	< 2	< 2	< 2	< 2	< 2
N-Nitrosodi-n-propylamine	< 2	< 2	< 2	< 2	< 2	< 2	< 2
N-Nitrosodiphenylamine	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Pentachlorophenol	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Phenanthrene	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Phenol	< 2	< 2	< 2	< 2	< 2	< 2	< 2
Potassium	< 10000	< 10000	< 10000	< 10000	< 10000	< 10000	< 10000
Pyrene	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Selenium	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Silver	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Sodium	454000	454000	537000	506000	401000	879000	456000
Styrene	< 2	< 2	< 2	< 2	< 2	< 2	< 2
Tetrachloroethene	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Thallium	< 2	< 2	< 2	< 2	< 2	< 2	< 2
Toluene	< 1	6.7	< 1	< 1	< 1	< 1	< 1
trans-1,2-Dichloroethene	< 1	< 1	< 1	< 1	< 1	< 1	< 1
trans-1,3-Dichloropropene	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Trichloroethene	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Vanadium	< 50	< 50	< 50	< 50	< 50	< 50	< 50
Vinyl chloride	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Xylenes [total]	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Zinc	< 20	61	< 20	< 20	< 20	< 20	33

All results in ug/L

Table 8c

WATER-QUALITY DATA SUMMARY, APRIL 2015
GROUND-WATER MONITORING WELLS
SUMMIT NATIONAL SUPERFUND SITE

Parameter	MW-4 4/21/2015	MW-11 4/21/2015	MW-107 4/21/2015	MW-107 (DUP) 4/21/2015	MW-108 4/21/2015	MW-111 4/20/2015	MW-111 (DUP) 4/20/2015	MW-113 4/21/2015	MW-114 4/21/2015	MW-115 4/21/2015	MW-207 4/21/2015	MW-209 4/21/2015	MW-220 4/21/2015	MW-224 4/20/2015	Rinse Blank #1	Rinse Blank #2	Trip Blank
Water Table Unit Wells											Upper Intermediate Unit Wells				QA/QC Samples		
1,1,1-Trichloroethane	< 1	20.1	27	< 20	4.4	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,1-Dichloroethane	< 1	57.7	1550	1560	359	34.5	34.6	< 1	< 1	1.1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,2-Dichloroethane	< 1	1.1	77.3	81.5	70	131	133	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Acetone	< 5	< 5	< 100	< 100	< 5	< 5	< 5	< 5	< 5	< 5	< 5	5.1	< 5	< 5	< 5	< 5	< 5
Benzene	< 0.5	J 0.33	103	108	137	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Chlorobenzene	< 1	< 1	62.3	60.3	J 0.27	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Chloroethane	< 1	< 1	20.4	J 18.1	< 1	1.6	1.5	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
cis-1,2-Dichloroethene	< 1	32.1	45.1	54.8	237	7.2	7.3	< 1	< 1	3.2	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Ethylbenzene	< 1	< 1	1220	1230	J 0.43	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Toluene	< 1	< 1	3960	3940	J 0.95	< 1	< 1	< 1	< 1	< 1	< 1	J 0.39	< 1	< 1	< 1	< 1	< 1
trans-1,2-Dichloroethene	< 1	1.1	< 20	< 20	6.5	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Trichloroethene	< 1	45.9	< 20	< 20	32.1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Vinyl chloride	< 1	3.6	55.4	60.1	114	8.4	8.9	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Xylene (total)	< 1	< 1	4140	4200	J 0.36	J 0.2	J 0.19	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1

All results in ug/L.

Bold - Quantified Results

J = Estimated result less than practical quantitation limit and greater than method detection limit.

Table 8d

**WATER-QUALITY DATA SUMMARY, APRIL 2016
GROUNDWATER MONITORING WELLS
SUMMIT NATIONAL SUPERFUND SITE**

Parameter	MW-4 4/13/2016	MW-11 4/12/2016	MW-107 4/13/2016	MW-108 4/13/2016	MW-108 (DUP) 4/13/2016	MW-111 4/12/2016	MW-113 4/13/2016	MW-114 4/13/2016	MW-115 4/13/2016	MW-207 4/12/2016	MW-209 4/13/2016	MW-220 4/13/2016	MW-224 4/12/2016	MW-224 (DUP) 4/12/2016	Rinse Blank #1	Rinse Blank #2	Trip Blank
	Water Table Unit Wells									Upper Intermediate Unit Wells					QA/QC Samples		
1,1,1-Trichloroethane	< 1	14	< 130	< 10	< 10	< 2	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,1-Dichloroethane	< 1	48	1200	310	280	17	< 1	< 1	0.74 J	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,2-Dichloroethane	< 1	0.98 J	54 J	61	60	57	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Acetone	< 10	< 17	< 1300	< 100	< 100	< 20	< 10	1.9 J	< 10	< 10	5.1 J	< 10	< 10	< 10	< 10	< 10	1.1 J
Benzene	< 1	< 1.7	84 J	130	120	< 2	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Chlorobenzene	< 1	< 1.7	46 J	< 10	< 10	< 2	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Chloroethane	< 1	< 1.7	< 130	< 10	< 10	0.7 J	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
cis-1,2-Dichloroethene	< 1	28	41 J	250	220	4	< 1	< 1	1.7	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Ethylbenzene	< 1	< 1.7	1000	< 10	< 10	< 2	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Toluene	< 1	< 1.7	3700	< 10	< 10	< 2	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
trans-1,2-Dichloroethene	< 1	0.74 J	< 130	6 J	5.6 J	< 2	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Trichloroethene	< 1	44	< 130	28	27	< 2	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Vinyl chloride	< 1	2.1	< 130	110	95	3.2	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Xylene (total)	< 2	< 3.3	3200	< 20	< 20	< 4	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2

All results in ug/L.

Bold - Quantified Results

J = Estimated result less than practical quantitation limit and greater than method detection limit.

Table 8e

WATER-QUALITY DATA SUMMARY, APRIL 2017
GROUNDWATER MONITORING WELLS
SUMMIT NATIONAL SUPERFUND SITE

Parameter	MW-4 4/13/2017	MW-11 4/12/2017	MW-107 4/13/2017	MW-107 (DUP) 4/13/2017	MW-108 4/12/2017	MW-108 (DUP) 4/12/2017	MW-111 4/12/2017	MW-113 4/13/2017	MW-114 4/13/2017	MW-115 4/13/2017	MW-207 4/12/2017	MW-209 4/13/2017	MW-220 4/13/2017	MW-224 4/12/2017	Rinse Blank #1	Rinse Blank #2	Trip Blank
Water Table Unit Wells											Upper Intermediate Unit Wells				QA/QC Samples		
1,1,1-Trichloroethane	< 1	14	11	11	3	3.5	0.67 J	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,1-Dichloroethane	< 1	54	1100	1200	260	270	19	< 1	< 1	0.64 J	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,2-Dichloroethane	< 1	1.2 J	55	50	59	51	73	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Acetone	< 10	< 25	< 63	< 63	< 10	< 10	< 25	< 10	2.7 J	< 10	< 10	5.6 J	4.1 J	< 10	< 10	< 10	< 10
Benzene	< 1	< 2.5	76	73	110	110	< 2.5	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Chlorobenzene	< 1	< 2.5	42	40	< 1	< 1	< 2.5	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Chloroethane	< 1	< 2.5	56	56	< 1	< 1	< 2.5	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
cis-1,2-Dichloroethene	< 1	27	11	11	180	190	4.4	< 1	< 1	1.6	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Ethylbenzene	< 1	< 2.5	990	970	0.30 J	0.28 J	< 2.5	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Toluene	< 1	< 2.5	1800	1800	0.74 J	0.72 J	< 2.5	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
trans-1,2-Dichloroethene	< 1	0.91 J	< 6.3	< 6.3	5.9	6	< 2.5	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Trichloroethene	< 1	42	< 6.3	< 6.3	29	31	< 2.5	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Vinyl chloride	< 1	4	17	19	82	86	4.9	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Xylene (total)	< 2	< 5	3200	3300	< 2	< 2	< 5	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2

All results in ug/L.

Bold - Quantified Results

J = Estimated result less than practical quantitation limit and greater than method detection limit.

Table 9a

**COMPARISON OF VOC DETECTIONS WITH MCLs
WATER TABLE UNIT SENTINEL WELLS
APRIL 2013 GROUND-WATER MONITORING EVENT
SUMMIT NATIONAL SUPERFUND SITE**

Sample ID	Parameter	Units	April 2013 Results	MCL	Exceeds MCL (Yes/No)
Sentinel Wells (WTU)					
MW-115	1,1-Dichloroethane	µg/l	2.1	-	N/A
MW-115	1,2-Dichloroethane	µg/l	0.60J	5	No
MW-115	Cis-1,2-Dichloroethene	µg/l	10.1	70	No
MW-115	Trans-1,2-Dichloroethene	µg/l	0.31J	100	No

Table 9b

**COMPARISON OF VOC DETECTIONS WITH MCLs
WATER TABLE UNIT SENTINEL WELLS
MAY 2014 GROUND-WATER MONITORING EVENT
SUMMIT NATIONAL SUPERFUND SITE**

Well ID	Parameter	Units	May 2014 Result	MCL	Exceeds MCL (Yes/No)
Sentinel Wells (WTU)					
MW-114	VOCs	ug/l	ND	—	No
MW-115	1,1-Dichloroethane	ug/l	1.1	—	No
MW-115	cis-1,2-Dichloroethane	ug/l	2.5	70	No
MW-115	trans-1,2-Dichloroethane	ug/l	<1	100	No
Additional Downgradient WTU Monitoring Wells					
MW-4	VOCs	ug/l	ND	—	No
MW-109	VOCs	ug/l	ND	—	No
MW-118	1,2-Dichloroethane	ug/l	1.8	5	No

VOCs - Includes all SSIIPL constituents

ND - No VOCs detected

Table 9c

COMPARISON OF VOC DETECTIONS WITH MCLs
WATER TABLE UNIT SENTINEL WELLS
APRIL 2015 GROUND-WATER MONITORING EVENT
SUMMIT NATIONAL SUPERFUND SITE

Well ID	Parameter	Units	April 2015 Result	MCL	Exceeds MCL (Yes/No)
Sentinel Wells (WTU)					
MW-114	VOCs	ug/l	ND	--	No
MW-115	1,1-Dichloroethane	ug/l	1.1	--	NA
MW-115	cis-1,2-Dichloroethene	ug/l	3.2	70	No

VOCs - Includes all SSIPL constituents

ND - No VOCs detected

Table 9d

**COMPARISON OF VOC DETECTIONS WITH MCLs
WATER TABLE UNIT SENTINEL WELLS
APRIL 2016 GROUNDWATER MONITORING EVENT
SUMMIT NATIONAL SUPERFUND SITE**

Well ID	Parameter	Units	April 2016 Result	MCL	Exceeds MCL (Yes/No)
Sentinel Wells (WTU)					
MW-114	Acetone	ug/l	1.9 J	--	NA
MW-115	1,1-Dichloroethane	ug/l	0.74 J	--	NA
MW-115	cis-1,2-Dichloroethane	ug/l	1.7	70	No

VOCs - Includes all SSIPL constituents

ND - No VOCs detected

Table 9e

COMPARISON OF VOC DETECTIONS WITH MCLs
 WATER TABLE UNIT SENTINEL WELLS
 APRIL 2017 GROUNDWATER MONITORING EVENT
 SUMMIT NATIONAL SUPERFUND SITE

Well ID	Parameter	Units	April 2017 Result	MCL	Exceeds MCL (Yes/No)
Sentinel Wells (WTU)					
MW-114	Acetone	ug/l	2.7 J	—	NA
MW-115	1,1-Dichloroethane	ug/l	0.64 J	—	NA
MW-115	cis-1,2-Dichloroethene	ug/l	1.6	70	No

Table 10a

SEDIMENT ANALYSIS DATA SUMMARY, APRIL 2013
S&E DITCH SEDIMENT
SUMMIT NATIONAL SUPERFUND SITE

PARAMETERS	Results 2013	units
Acetone	63.1/5.6J	µg/kg
Carbon Disulfide	1.5J/ND (11)	µg/kg
Methylene Chloride	4.3J/5.3J	µg/kg

Note: "J" indicates an estimated result below the reporting limit

Table 10b

WATER-QUALITY & SEDIMENT DATA SUMMARY, MAY 2014
SURFACE WATER AND SEDIMENT
SUMMIT NATIONAL SUPERFUND SITE

Parameter	S&E Ditch Sediment 5/7/2014 Result	Parameter	S&E Ditch Sediment 5/7/2014 Result	Parameter	S&E Ditch Sediment 5/7/2014 Result
1,1,1-Trichloroethane	< 7	Benzo(b)fluoranthene	1 23.5	Pyrene	1 32.9
1,1,2,2-Tetrachloroethane	< 7	Benzo(g,h,i)perylene	< 52	Styrene	< 7
1,1,2-Trichloroethane	< 7	Benzo(k)fluoranthene	< 52	Tetrachloroethane	< 7
1,1-Dichloroethane	< 7	bis(2-Chloroethoxy)methane	< 100	Toluene	< 1.4
1,1-Dichlorobenzene	< 7	bis(2-Chloroethyl)ether	< 100	trans-1,2-Dichloroethane	< 7
1,2,4-Trichlorobenzene	< 100	bis(2-Chloroisopropyl)ether	< 100	trans-1,3-Dichloropropene	< 7
1,2-Dichlorobenzene	< 100	bis(2-Ethylhexyl)phthalate	< 100	Trichloroethane	< 7
1,2-Dichloroethane	< 1.4	Bromodichloromethane	< 7	Vinyl chloride	< 7
1,2-Dichloroethane (total)	< 7	Bromoform	< 7	Xylene (total)	< 1.4
1,2-Dichloropropane	< 7	Bromomethane	< 7		
1,3-Dichlorobenzene	< 100	Butyl benzyl phthalate	< 100		
1,4-Dichlorobenzene	< 100	Carbazole	< 100		
2,4,5-Trichlorophenol	< 260	Carbon disulfide	< 7		
2,4,6-Trichlorophenol	< 260	Carbon tetrachloride	< 7		
2,4-Dichlorophenol	< 260	Chlorobenzene	< 7		
2,4-Dimethylphenol	< 260	Chloroethane	< 7		
2,4-Dinitrophenol	< 1000	Chloroform	< 7		
2,4-Dinitrotoluene	< 52	Chloromethane	< 7		
2,6-Dinitrotoluene	< 52	Chrysene	1 22.2		
2-Butanone (MEK)	< 14	cis-1,2-Dichloroethane	< 7		
2-Chloronaphthalene	< 100	cis-1,3-Dichloropropene	< 7		
2-Chlorophenol	< 100	Dibenzo(a,h)anthracene	< 52		
2-Hexanone	< 7	Dibenzofuran	< 100		
2-Methylnaphthalene	1 86.9	Dibromochloromethane	< 7		
2-Methylphenol	< 100	Diethyl phthalate	< 100		
2-Nitroaniline	< 260	Dimethyl phthalate	< 100		
2-Nitrophenol	< 260	Di-n-butyl phthalate	< 100		
3,4-Methylphenol	< 100	Di-n-octyl phthalate	< 100		
3,3'-Dichlorobenzidine	< 100	Ethylbenzene	< 1.4		
3-Nitroaniline	< 260	Fluoranthene	1 24.7		
4,6-Dinitro-o-cresol	< 1000	Fluorene	< 52		
4-Bromophenyl phenyl ether	< 100	Hexachlorobenzene	< 100		
4-Chloro-3-methyl phenol	< 260	Hexachlorobutadiene	< 52		
4-Chloroaniline	< 260	Hexachlorocyclopentadiene	< 520		
4-Chlorophenyl phenyl ether	< 100	Hexachloroethane	< 260		
4-Methyl-2-pentanone(MIBK)	< 7	Indeno(1,2,3-cd)pyrene	< 52		
4-Nitroaniline	< 260	Isophorone	< 100		
4-Nitrophenol	< 520	Methylene chloride	< 7		
Acenaphthene	< 52	Naphthalene	54.7		
Acenaphthylene	< 52	Nitrobenzene	< 100		
Acetone	< 14	N-Nitroso-di-n-propylamine	< 100		
Anthracene	< 52	N-Nitrosodiphenylamine	< 260		
Benzene	< 1.4	Pentachlorophenol	< 520		
Benzo(a)anthracene	< 52	Phenanthrene	64.6		
Benzo(a)pyrene	< 52	Phenol	< 100		

All results in ug/Kg

Table 10c

1 of 3

SEDIMENT ANALYSIS DATA SUMMARY, APRIL 2015
S & E DITCH SEDIMENT
SUMMIT NATIONAL SUPERFUND SITE

Parameter	S&E Ditch Sediment 4/22/2015	S&E Ditch Sediment (DUP) 4/22/2015	Sediment (#2) 4/22/2015	Sediment (#3) 4/22/2015	Rinsate Blank	Trip Blank	USEPA RSLs ¹ Resident	USEPA RSLs ¹ Industrial
Volatile Organic Compounds								
1,1,1-Trichloroethane	< 2.7	< 2.9	< 2.7	< 2.7	< 1	< 2	8100000	36000000
1,1,2,2-Tetrachloroethane	< 2.7	< 2.9	< 2.7	< 2.7	< 1	< 2	600	2700
1,1,2-Trichloroethane	< 2.7	< 2.9	< 2.7	< 2.7	< 1	< 2	1100	5000
1,1-Dichloroethane	< 1.3	< 1.5	< 1.4	< 1.3	< 1	< 1	3600	16000
1,1-Dichloroethene	< 1.3	< 1.5	< 1.4	< 1.3	< 1	< 1	230000	1000000
1,2-Dichloroethane	< 1.3	< 1.5	< 1.4	< 1.3	< 1	< 1	460	2000
1,2-Dichloroethene (total)	< 1.3	< 1.5	< 1.4	< 1.3	< 1	< 1	--	--
1,2-Dichloropropane	< 2.7	< 2.9	< 2.7	< 2.7	< 1	< 2	1000	4400
2-Butanone (MEK)	< 13	< 15	< 14	< 13	< 5	< 10	27000000	190000000
2-Hexanone	< 6.6	< 7.3	< 6.8	< 6.6	< 5	< 5	200000	1300000
4-Methyl-2-pentanone (MIBK)	< 6.6	< 7.3	< 6.8	< 6.6	< 5	< 5	5300000	56000000
Acetone	< 13	< 15	< 14	< 13	< 5	< 10	61000000	670000000
Benzene	< 0.66	< 0.73	< 0.68	< 0.66	< 0.5	< 0.5	1200	5100
Bromodichloromethane	< 2.7	< 2.9	< 2.7	< 2.7	< 1	< 2	290	1300
Bromoform	< 6.6	< 7.3	< 6.8	< 6.6	< 1	< 5	190000	86000
Bromomethane	< 6.6	< 7.3	< 6.8	< 6.6	< 2	< 5	6800	30000
Carbon disulfide	< 2.7	< 2.9	< 2.7	< 2.7	< 2	< 2	770000	3500000
Carbon tetrachloride	< 2.7	< 2.9	< 2.7	< 2.7	< 1	< 2	650	2900
Chlorobenzene	< 2.7	< 2.9	< 2.7	< 2.7	< 1	< 2	280000	1300000
Chloroethane	< 6.6	< 7.3	< 6.8	< 6.6	< 1	< 5	14000000	57000000
Chloroform	< 2.7	< 2.9	< 2.7	< 2.7	< 1	< 2	320	1400
Chloromethane	< 6.6	< 7.3	< 6.8	< 6.6	< 1	< 5	110000	460000
cis-1,2-Dichloroethene	< 1.3	< 1.5	< 1.4	< 1.3	< 1	< 1	160000	2300000
cis-1,3-Dichloropropene	< 2.7	< 2.9	< 2.7	< 2.7	< 1	< 2	--	--
Dibromochloromethane	< 2.7	< 2.9	< 2.7	< 2.7	< 1	< 2	750	3300
Ethylbenzene	< 1.3	< 1.5	< 1.4	< 1.3	< 1	< 1	5800	25000
Methylene chloride	< 6.6	< 7.3	< 6.8	< 6.6	< 2	< 5	57000	1000000
Styrene	< 2.7	< 2.9	< 2.7	< 2.7	< 1	< 2	6000000	35000000
Tetrachloroethene	< 2.7	< 2.9	< 2.7	< 2.7	< 1	< 2	2400	100000
Toluene	< 1.3	< 1.5	< 1.4	< 1.3	< 1	< 1	4900000	47000000
trans-1,2-Dichloroethene	< 1.3	< 1.5	< 1.4	< 1.3	< 1	< 1	1600000	23000000
trans-1,3-Dichloropropene	< 2.7	< 2.9	< 2.7	< 2.7	< 1	< 2	--	--
Trichloroethene	< 1.3	< 1.5	< 1.4	< 1.3	< 1	< 1	940	6000
Vinyl chloride	< 2.7	< 2.9	< 2.7	< 2.7	< 1	< 2	59	1700
Xylene (total)	< 1.3	< 1.5	< 1.4	< 1.3	< 1	< 1	650000	2800000

All values in ug/Kg, except Rinsate Blank (ug/L)

¹USEPA, Region 9, Regional Screening Levels (RSL), June 2015 (revised)

Bold - Quantified Result

J = Estimated result less than practical quantitation limit and greater than method detection limit.

Table 10c
2 of 3

SEDIMENT ANALYSIS DATA SUMMARY, APRIL 2015
S & E DITCH SEDIMENT
SUMMIT NATIONAL SUPERFUND SITE

Parameter	S&E Ditch Sediment 4/22/2015	S&E Ditch Sediment (DUP) 4/22/2015	Sediment (#2) 4/22/2015	Sediment (#3) 4/22/2015	Rinsate Blank	USEPA RSLs ¹ Resident	USEPA RSLs ¹ Industrial
Semi-Volatile Organic Compounds							
1,2,4-Trichlorobenzene	< 100	< 100	< 88	< 91	< 1	34000	110000
1,2-Dichlorobenzene	< 100	< 100	< 88	< 91	< 1	1800000	9300000
1,3-Dichlorobenzene	< 100	< 100	< 88	< 91	< 1	—	—
1,4-Dichlorobenzene	< 100	< 100	< 88	< 91	< 1	2600	11000
2,4,5-Trichlorophenol	< 260	< 250	< 220	< 230	< 5	2300000	82000000
2,4,6-Trichlorophenol	< 260	< 250	< 220	< 230	< 5	49000	210000
2,4-Dichlorophenol	< 260	< 250	< 220	< 230	< 2	190000	2500000
2,4-Dimethylphenol	< 260	< 250	< 220	< 230	< 5	1300000	16000000
2,4-Dinitrophenol	< 260	< 250	< 220	< 230	< 10	130000	1600000
2,4-Dinitrotoluene	< 52	< 51	< 44	< 46	< 1	1700	7400
2,6-Dinitrotoluene	< 52	< 51	< 44	< 46	< 1	360	1500
2-Chloronaphthalene	< 100	< 100	< 88	< 91	< 2	4800000	60000000
2-Chlorophenol	< 100	< 100	< 88	< 91	< 5	390000	5800000
2-Methylnaphthalene	J 48.6	J 58	131	J 68.2	< 1	240000	3000000
2-Methylphenol	< 100	< 100	< 88	< 91	< 2	3200000	41000000
2-Nitroaniline	< 260	< 250	< 220	< 230	< 5	630000	8000000
2-Nitrophenol	< 260	< 250	< 220	< 230	< 5	—	—
3,4-Methylphenol	< 100	< 100	< 88	< 91	< 2	6300000	82000000
3,3'-Dichlorobenzidine	< 100	< 100	< 88	< 91	< 2	1200	5100
3-Nitroaniline	< 260	< 250	< 220	< 230	< 5	—	—
4,6-Dinitro-o-cresol	< 260	< 250	< 220	< 230	< 5	5100	66000
4-Bromophenyl phenyl ether	< 100	< 100	< 88	< 91	< 2	—	—
4-Chloro-3-methyl phenol	< 260	< 250	< 220	< 230	< 5	6300000	82000000
4-Chloroaniline	< 260	< 250	< 220	< 230	< 5	2700	11000
4-Chlorophenyl phenyl ether	< 100	< 100	< 88	< 91	< 2	—	—
4-Nitroaniline	< 260	< 250	< 220	< 230	< 5	27000	110000
4-Nitrophenol	< 520	< 510	< 440	< 460	< 10	—	—
Acenaphthene	< 52	< 51	< 44	< 46	< 1	2600000	45000000
Acenaphthylene	< 52	< 51	< 44	< 46	< 1	—	—
Anthracene	< 52	< 51	< 44	< 46	< 1	18000000	230000000
Benzo(a)anthracene	< 52	< 51	< 44	J 24.1	< 1	160	2900
Benzo(a)pyrene	< 52	< 51	< 44	J 19.2	< 1	16	290
Benzo(b)fluoranthene	< 52	< 51	J 22	J 26.7	< 1	160	2900
Benzo(g,h,i)perylene	< 52	< 51	J 30.4	J 28.2	< 1	—	—
Benzo(k)fluoranthene	< 52	< 51	< 44	< 46	< 1	1600	29000
bis(2-Chloroethoxy)methane	< 100	< 100	< 88	< 91	< 2	190000	2500000
bis(2-Chloroethyl)ether	< 100	< 100	< 88	< 91	< 2	230	1000
Butyl benzyl phthalate	< 100	< 100	< 88	< 91	< 2	290000	1200000
Carbazole	< 100	< 100	< 88	< 91	< 1	—	—
Chrysene	< 52	< 51	J 24.9	J 24.5	< 1	16000	290000
Dibenzo(a,h)anthracene	< 52	< 51	< 44	< 46	< 1	16	290

All values in ug/Kg, except Rinsate Blank (ug/l.)

¹USEPA, Region 9, Regional Screening Levels (RSL); June 2015 (revised)

bold - Quantified Result

J = Estimated result less than practical quantitation limit and greater than method detection limit.

Table 10c
3 of 3

SEDIMENT ANALYSIS DATA SUMMARY, APRIL 2015
S & E DITCH SEDIMENT
SUMMIT NATIONAL SUPERFUND SITE

Parameter	S&E Ditch Sediment 4/22/2015	S&E Ditch Sediment (DUP) 4/22/2015	Sediment (#2) 4/22/2015	Sediment (#3) 4/22/2015	Residue Blank	USEPA RSLs ¹ Resident	USEPA RSLs ¹ Industrial
Semi-Volatile Organic Compounds (Continued)							
Dibenzofuran	< 100	< 100	J 29.4	< 91	< 5	73000	1000000
Diethyl phthalate	< 100	< 100	< 88	< 91	< 2	51000000	660000000
Dimethyl phthalate	< 100	< 100	< 88	< 91	< 2	—	—
Di-n-butyl phthalate	J 53.2	210	J 79.2	99.9	< 2	6300000	82000000
Di-n-octyl phthalate	< 100	< 100	< 88	< 91	< 2	630000	8200000
Fluoranthene	< 52	< 51	J 27.5	J 28.5	< 1	2400000	30000000
Fluorene	< 52	< 51	< 44	< 46	< 1	2400000	30000000
Hexachlorobenzene	< 100	< 100	< 88	< 91	< 1	210	960
Hexachlorobutadiene	< 52	< 51	< 44	< 46	< 1	1200	5300
Hexachlorocyclopentadiene	< 520	< 510	< 440	< 460	< 10	1800	7500
Hexachloromethane	< 260	< 250	< 220	< 230	< 2	1800	8000
Indeno(1,2,3-cd)pyrene	< 52	< 51	< 44	< 46	< 1	160	2900
Isophorone	< 100	< 100	< 88	< 91	< 2	570000	2400000
Naphthalene	J 30.6	J 33.1	75.4	J 26.9	< 1	2800	17000
Nitrobenzene	< 100	< 100	< 88	< 91	< 2	5100	22000
N-Nitroso-di-n-propylamine	< 100	< 100	< 88	< 91	< 2	78	330
N-Nitrosodiphenylamine	< 260	< 250	< 220	< 230	< 5	110000	4700000
Pentachlorophenol	< 260	< 250	< 220	< 230	< 5	1000	4000
Phenanthrene	J 34.6	J 48.8	98.3	56	< 1	—	—
Phenol	< 100	< 100	< 88	< 91	< 2	1700000	17000000
Pyrene	< 52	J 20.9	J 36	J 32.6	< 1	1800000	23000000

All values in ug/Kg, except Residue Blank (ug/L)

¹USEPA, Region 9, Regional Screening Levels (RSL), June 2015 (revised)

Bold - Quantified Result

J = Estimated result less than practical quantitation limit and greater than method detection limit.

Table 10d
1 of 3

SEDIMENT ANALYSIS DATA SUMMARY, APRIL 2016
S & E DITCH SEDIMENT
SUMMIT NATIONAL SUPERFUND SITE

Parameter	S&E Ditch Sediment 4/12/2016	S&E Ditch Sediment (DUP) 4/12/2016	RPD ¹	Rinse Blank	Trip Blank	USEPA RSLs ² Resident	USEPA RSLs ² Industrial
Volatile Organic Compounds							
1,1,1-Trichloroethane	< 5.2	< 5.4	NC ³	< 1	< 1	8100000	36000000
1,1,2,2-Tetrachloroethane	< 5.2	< 5.4	NC ³	< 1	< 1	600	2700
1,1,2-Trichloroethane	< 5.2	< 5.4	NC ³	< 1	< 1	1100	5000
1,1-Dichloroethane	< 5.2	< 5.4	NC ³	< 1	< 1	3600	16000
1,1-Dichloroethene	< 5.2	< 5.4	NC ³	< 1	< 1	230000	1000000
1,2-Dichloroethane	< 5.2	< 5.4	NC ³	< 1	< 1	460	2000
1,2-Dichloroethene (total)	< 10	< 11	NC ³	< 2	< 2	—	—
1,2-Dichloropropane	< 5.2	< 5.4	NC ³	< 1	< 1	1000	4400
2-Butanone (MEK)	< 21	< 21	NC ³	< 10	< 10	27000000	190000000
2-Hexanone	< 21	0.76 J	NC ³	< 10	< 10	200000	1300000
4-Methyl-2-pentanone(MIBK)	< 21	< 21	NC ³	< 10	< 10	33000000	140000000
Acetone	< 21	< 21	NC ³	< 10	11.5	61000000	670000000
Benzene	< 5.2	< 5.4	NC ³	< 1	< 1	1200	5100
Bromodichloromethane	< 5.2	< 5.4	NC ³	< 1	< 1	290	1300
Bromoform	< 5.2	< 5.4	NC ³	< 1	< 1	190000	86000
Bromomethane	< 5.2	< 5.4	NC ³	< 1	< 1	6800	30000
Carbon disulfide	< 5.2	< 5.4	NC ³	< 1	< 1	770000	3500000
Carbon tetrachloride	< 5.2	< 5.4	NC ³	< 1	< 1	650	2900
Chlorobenzene	< 5.2	< 5.4	NC ³	< 1	< 1	280000	1300000
Chloroethane	< 5.2	< 5.4	NC ³	< 1	< 1	14000000	57000000
Chloroform	0.50 J	0.57 J	13.1	< 1	< 1	320	1400
Chloromethane	< 5.2	< 5.4	NC ³	< 1	< 1	110000	460000
cis-1,3-Dichloropropene	< 5.2	< 5.4	NC ³	< 1	< 1	—	—
Dibromochloromethane	< 5.2	< 5.4	NC ³	< 1	< 1	8300	39000
Ethylbenzene	< 5.2	< 5.4	NC ³	< 1	< 1	5800	25000
Methyl isocyanide	< 5.2	< 5.4	NC ³	< 1	< 1	57000	1000000
Styrene	< 5.2	< 5.4	NC ³	< 1	< 1	6000000	35000000
Tetrachloroethene	< 5.2	< 5.4	NC ³	< 1	< 1	24000	100000
Toluene	< 5.2	< 5.4	NC ³	< 1	< 1	4900000	47000000
trans-1,3-Dichloropropene	< 5.2	< 5.4	NC ³	< 1	< 1	—	—
Trichloroethene	< 5.2	< 5.4	NC ³	< 1	< 1	940	6000
Vinyl chloride	< 5.2	< 5.4	NC ³	< 1	< 1	59	1700
Xylene (total)	< 10	< 11	NC ³	< 2	< 2	650000	2800000

All values in ug/Kg, except Rinse Blank and Trip Blank (ug/L)

¹ RPD - Relative Percent Difference

² USEPA, Region 9, Regional Screening Levels (RSL), November 2015 (revised); THQ = 1.0

³ NC - Not Calculable

BDL - Quantified Result

J = Estimated result less than practical quantitation limit and greater than method detection limit.

Table 10d
2 of 3

SEDIMENT ANALYSIS DATA SUMMARY, APRIL 2016
S & E DITCH SEDIMENT
SUMMIT NATIONAL SUPERFUND SITE

Parameter	S&E Ditch Sediment 4/12/2016	S&E Ditch Sediment (DUP) 4/12/2016	RPD ¹	Rinsate Blank	USEPA RSLs ² Resident	USEPA RSLs ² Industrial
Semi-Volatile Organic Compounds						
1,2,4-Trichlorobenzene	< 65	< 68	NC ³	< 0.89	24000	110000
1,2-Dichlorobenzene	< 65	< 68	NC ³	< 0.89	1800000	9300000
1,3-Dichlorobenzene	< 65	< 68	NC ³	< 0.89	—	—
1,4-Dichlorobenzene	< 65	< 68	NC ³	< 0.89	2600	11000
2,2'-oxybis[1-chloropropane]	< 130	< 140	NC ³	< 0.89	3100000	47000000
2,4,5-Trichlorophenol	< 200	< 200	NC ³	< 4.5	6300000	82000000
2,4,6-Trichlorophenol	< 200	< 200	NC ³	< 4.5	49000	210000
2,4-Dichlorophenol	< 200	< 200	NC ³	< 1.8	190000	2500000
2,4-Dimethylphenol	< 200	< 200	NC ³	< 1.8	1300000	16000000
2,4-Dinitrophenol	< 430	< 450	NC ³	< 36	130000	1600000
2,4-Dinitrotoluene	< 260	< 270	NC ³	< 4.5	1700	7400
2,6-Dinitrotoluene	< 260	< 270	NC ³	< 4.5	360	1500
2-Chloronaphthalene	< 65	< 68	NC ³	< 0.89	4800000	60000000
2-Chlorophenol	< 65	< 68	NC ³	< 0.89	390000	5800000
2-Methylnaphthalene	660 J	500 J	27.6	< 0.18	240000	3000000
2-Methylphenol	< 260	< 270	NC ³	< 0.89	3200000	41000000
2-Nitraniline	< 260	< 270	NC ³	< 1.8	630000	8000000
2-Nitrophenol	< 65	< 68	NC ³	< 1.8	—	—
3,4-Methylphenol	< 520	< 540	NC ³	< 1.8	6300000	82000000
3,3'-Dichlorobenzidine	< 130	< 140	NC ³	< 4.5	1200	5100
3-Nitraniline	< 260 J	< 270 J	NC ³	< 1.8	—	—
4,6-Dinitro-2-methylphenol	< 200	< 200	NC ³	< 4.5	5100	66000
4-Bromophenyl phenyl ether	< 65	< 68	NC ³	< 1.8	—	—
4-Chloro-3-methylphenol	< 200	< 200	NC ³	< 1.8	6300000	82000000
4-Chloraniline	< 200	< 200	NC ³	< 1.8	2700	11000
4-Chlorophenyl phenyl ether	< 65	< 68	NC ³	< 1.8	—	—
4-Nitraniline	< 260	< 270	NC ³	< 1.8	27000	110000
4-Nitrophenol	< 430	< 450	NC ³	< 4.5	—	—
Acenaphthene	10	8.7 J	13.9	< 0.18	3600000	45000000
Acenaphthylene	< 8.7	< 9.1	NC ³	< 0.18	—	—
Anthracene	12	14	15.4	< 0.18	18000000	230000000
Benzo(a)anthracene	39	39	0.0	< 0.18	160	2900
Benzo(a)pyrene	40	41	2.5	< 0.18	16	290
Benzo(b)fluoranthene	76	72	5.4	< 0.18	160	2900
Benzo(g,h,i)perylene	130	160	20.7	< 0.18	—	—
Benzo(k)fluoranthene	20	20	0.0	< 0.18	1600	29000
bis(2-Chloroethoxy)methane	< 130	< 140	NC ³	< 0.89	190000	2500000
bis(2-Chloroethyl)ether	< 130	< 140	NC ³	< 0.89	230	1000
bis(2-ethylhexyl)phthalate	33 J	42 J	24.0	< 1.8	39000	160000

All values in ug/Kg, except Rinsate Blank (ug/L)

¹ RPD = Relative Percent Difference

² USEPA, Region 9, Regional Screening Levels (RSL), November 2015 (revised); THQ = 1.0

³ NC = Not Calculable

bold = Quantified Result

J = Estimated result less than practical quantitation limit and greater than method detection limit.

Table 10d
3 of 3

SEDIMENT ANALYSIS DATA SUMMARY, APRIL 2016
S & E DITCH SEDIMENT
SUMMIT NATIONAL SUPERFUND SITE

Parameter	S&E Ditch Sediment 4/12/2016	S&E Ditch Sediment (DUP) 4/12/2016	RPD ¹	Rinstate Blank	USEPA RSLs ² Resident	USEPA RSLs ² Industrial
Semi-Volatile Organic Compounds (Continued)						
Butyl benzyl phthalate	52 J	< 95	NC ³	< 0.89	290000	1200000
Carbazole	< 65	< 68	NC ³	< 0.89	—	—
Chrysene	70	78	10.8	< 0.18	16000	290000
Dibenzo(a,h)anthracene	11	13	16.7	< 0.18	16	290
Dibenzofuran	140	130	7.4	< 0.89	73000	1000000
Diethyl phthalate	< 91	< 95	NC ³	< 0.89	51000000	660000000
Dimethyl phthalate	< 91	< 95	NC ³	< 0.89	—	—
Di-n-butyl phthalate	25 J	23 J	8.3	< 0.89	6300000	82000000
Di-n-octyl phthalate	< 91	< 95	NC ³	< 0.89	630000	8200000
Fluoranthene	89	120	29.7	< 0.18	2400000	30000000
Fluorene	19	18	5.4	< 0.18	2400000	30000000
Hexachlorobenzene	< 8.7	< 9.1	NC ³	< 0.89	210	960
Hexachlorobutadiene	< 65	< 68	NC ³	< 0.89	1200	5300
Hexachlorocyclopentadiene	< 430	< 450	NC ³	< 8.9	1800	7500
Hexachloroethane	< 65	< 68	NC ³	< 0.89	1800	8000
Indeno(1,2,3-cd)pyrene	31	34	9.2	< 0.18	160	2900
Isophorone	< 65	< 68	NC ³	< 0.89	570000	2400000
Naphthalene	440 J	330 J	28.6	< 0.18	3800	17000
Nitrobenzene	< 130	< 140	NC ³	< 0.89	5100	22000
N-Nitroso-di-n-propylamine	< 65	< 68	NC ³	< 0.89	78	330
N-Nitrosodiphenylamine	< 65	< 68	NC ³	< 0.89	110000	470000
Pentachlorophenol	< 200	< 200	NC ³	< 36	1000	4000
Phenanthrene	320	380	17.1	< 0.18	—	—
Phenol	< 65	< 68	NC ³	< 0.89	19000000	250000000
Pyrene	110	130	16.7	< 0.18	1800000	23000000

All values in ug/Kg, except Rinstate Blank (ug/L)

¹ RPD - Relative Percent Difference

² USEPA, Region 9, Regional Screening Levels (RSL), November 2015 (revised), THQ = 1.0

³ NC - Not Calculable

Bold - Quantified Result

J - Estimated result less than practical quantitation limit and greater than method detection limit

Table 10e
1 of 3

SEDIMENT ANALYSIS DATA SUMMARY, APRIL 2017
S & E DITCH SEDIMENT
SUMMIT NATIONAL SUPERFUND SITE

Parameter	S&E Ditch Sediment 4/13/2017	S&E Ditch Sediment (DUP) 4/13/2017	RPD ¹	Rinse Blank	Trip Blank	USEPA RSL ² Resident	USEPA RSL ² Industrial
Volatile Organic Compounds:							
1,1,1-Trichloroethane	< 6.9	< 5.6	NC ³	< 1	< 1	8100000	36000000
1,1,2,2-Tetrachloroethane	< 6.9	< 5.6	NC ³	< 1	< 1	600	2700
1,1,2-Trichloroethane	< 6.9	< 5.6	NC ³	< 1	< 1	1100	5000
1,1-Dichloroethane	< 6.9	< 5.6	NC ³	< 1	< 1	3600	16000
1,1-Dichloroethane	< 6.9	< 5.6	NC ³	< 1	< 1	230000	1000000
1,2-Dichloroethane	< 6.9	< 5.6	NC ³	< 1	< 1	460	2000
1,2-Dichloroethane (total)	< 14	< 11	NC ³	< 2	< 2	--	--
1,2-Dichloropropane	< 6.9	< 5.6	NC ³	< 1	< 1	1000	4400
2-Butanone (MEK)	< 28	< 22	NC ³	< 10	< 10	27000000	190000000
2-Hexanone	< 28	< 22	NC ³	< 10	< 10	200000	1300000
4-Methyl-2-pentanone(MIBK)	< 28	< 22	NC ³	< 10	< 10	33000000	140000000
Acetone	< 28	< 22	NC ³	< 10	< 10	61000000	670000000
Benzene	< 6.9	< 5.6	NC ³	< 1	< 1	1200	5100
Bromodichloromethane	< 6.9	< 5.6	NC ³	< 1	< 1	290	1300
Bromoform	< 6.9	< 5.6	NC ³	< 1	< 1	19000	86000
Bromomethane	< 6.9	< 5.6	NC ³	< 1	< 1	6800	30000
Carbon disulfide	< 6.9	< 5.6	NC ³	< 1	< 1	770000	3500000
Carbon tetrachloride	< 6.9	< 5.6	NC ³	< 1	< 1	650	2900
Chlorobenzene	< 6.9	< 5.6	NC ³	< 1	< 1	280000	1300000
Chloroethane	< 6.9	< 5.6	NC ³	< 1	< 1	14000000	57000000
Chloroform	0.32 J	< 5.6	NC ³	< 1	< 1	320	1400
Chloromethane	< 6.9	< 5.6	NC ³	< 1	< 1	110000	460000
cis-1,3-Dichloropropene	< 6.9	< 5.6	NC ³	< 1	< 1	--	--
Dibromochloromethane	< 6.9	< 5.6	NC ³	< 1	< 1	8300	39000
Ethylbenzene	< 6.9	< 5.6	NC ³	< 1	< 1	5800	25000
Methylene chloride	< 6.9	< 5.6	NC ³	< 1	< 1	57000	1000000
Styrene	< 6.9	< 5.6	NC ³	< 1	< 1	6000000	35000000
Tetrachloroethane	< 6.9	< 5.6	NC ³	< 1	< 1	24000	100000
Toluene	< 6.9	< 5.6	NC ³	< 1	< 1	4900000	47000000
trans-1,3-Dichloropropene	< 6.9	< 5.6	NC ³	< 1	< 1	--	--
Trichloroethane	< 6.9	< 5.6	NC ³	< 1	< 1	940	6000
Vinyl chloride	< 6.9	< 5.6	NC ³	< 1	< 1	59	1700
Xylene (total)	< 14	< 11	NC ³	< 2	< 2	580000	2500000

All values in ug/Kg, except Rinse Blank and Trip Blank (ug/L)

¹ RPD - Relative Percent Difference

² USEPA, Region 9, Regional Screening Levels (RSL); May 2016 (revised); THQ = 1.0

³ NC - Not Calculable

Bold - Quantified Result

J = Estimated result less than practical quantitation limit and greater than method detection limit.

R = Rejected value based on data validation results

Table 10e
2 of 3

SEDIMENT ANALYSIS DATA SUMMARY, APRIL 2017
S & E DITCH SEDIMENT
SUMMIT NATIONAL SUPERFUND SITE

Parameter	S&E Ditch Sediment 4/13/2017	S&E Ditch Sediment (DUP) 4/13/2017	RPD ¹	Rinsate Blank	USEPA RSL ² Resident	USEPA RSL ² Industrial
Semi-Volatile Organic Compounds						
1,2,4-Trichlorobenzene	< 72	< 73	NC ³	< 0.89	24000	110000
1,2-Dichlorobenzene	< 72	< 73	NC ³	< 0.89	1800000	9300000
1,3-Dichlorobenzene	< 72	< 73	NC ³	< 0.89	--	--
1,4-Dichlorobenzene	< 72	< 73	NC ³	< 0.89	2600	11000
2,2'-oxybis[1-chloropropane]	< 140	< 150	NC ³	< 0.89	3100000	47000000
2,4,5-Trichlorophenol	< 220	< 220	NC ³	< 4.5	6300000	\$2000000
2,4,6-Trichlorophenol	< 220	< 220	NC ³	< 4.5	49000	210000
2,4-Dichlorophenol	< 220	< 220	NC ³	< 1.8	190000	2500000
2,4-Dimethylphenol	< 220	< 220	NC ³	< 1.8	1300000	16000000
2,4-Dinitrophenol	< 470	< 480	NC ³	< 36	130000	1600000
2,4-Dinitrotoluene	< 290	< 290	NC ³	< 4.5	1700	7400
2,6-Dinitrotoluene	< 290	< 290	NC ³	< 4.5	360	1500
2-Chloronaphthalene	< 72	< 73	NC ³	< 0.89	4800000	60000000
2-Chlorophenol	< 72	< 73	NC ³	< 0.89	390000	5800000
2-Methylnaphthalene	1200	1100	9%	< 0.18	240000	3000000
2-Methylphenol	< 290	< 290	NC ³	< 0.89	3200000	41000000
2-Nitroaniline	< 290	< 290	NC ³	< 1.8	630000	8000000
2-Nitrophenol	< 72	< 73	NC ³	< 1.8	--	--
3&4-Methylphenol	< 570	< 590	NC ³	< 1.8	6300000	\$2000000
3,3'-Dichlorobenzidine	< 140 R	< 150 R	NC ³	< 4.5	1200	5100
3-Nitroaniline	< 290 R	< 290 R	NC ³	< 1.8	--	--
4,6-Dinitro-2-methylphenol	< 220	< 220	NC ³	< 4.5	5100	66000
4-Bromophenyl phenyl ether	< 72	< 73	NC ³	< 1.8	--	--
4-Chloro-3-methyl phenol	< 220	< 220	NC ³	< 1.8	6300000	\$2000000
4-Chloroaniline	< 220 R	< 220 R	NC ³	< 1.8	2700	11000
4-Chlorophenyl phenyl ether	< 72	< 73	NC ³	< 1.8	--	--
4-Nitroaniline	< 290 R	< 290 R	NC ³	< 1.8	27000	110000
4-Nitrophenol	< 470	< 480	NC ³	< 4.5	--	--
Acenaphthene	26	20	26%	< 0.18	3600000	45000000
Acenaphthylene	18	15	18%	< 0.18	--	--
Anthracene	21	16	27%	< 0.18	18000000	230000000
Benzo(a)anthracene	80	67	18%	< 0.18	160	2900
Benzo(a)pyrene	100	87	14%	< 0.18	16	290
Benzo(b)fluoranthene	190	170	11%	< 0.18	160	2900
Benzo(g,h,i)perylene	240	250	4%	< 0.18	--	--
Benzo(k)fluoranthene	46	41	11%	< 0.18	1600	29000
bis(2-Chloroethoxy)methane	< 140	< 150	NC ³	< 0.89	190000	2500000
bis(2-Chloroethyl)ether	< 140	< 150	NC ³	< 0.89	230	1000
bis(2-ethylhexyl)phthalate	< 100	< 100	NC ³	1.6 J	39000	160000

All values in ug/Kg, except Rinsate Blank (ug/L)

¹ RPD - Relative Percent Difference

² USEPA, Region 9, Regional Screening Levels (RSL): May 2016 (revised); THQ = 1.0

³ NC - Not Calculable

Bold - Quantified Result

J - Estimated result less than practical quantitation limit and greater than method detection limit.

R - Rejected value based on data validation results

Table 10e
3 of 3

SEDIMENT ANALYSIS DATA SUMMARY, APRIL 2017
S & E DITCH SEDIMENT
SUMMIT NATIONAL SUPERFUND SITE

Parameter	S&E Ditch Sediment 4/13/2017	S&E Ditch Sediment (DUP) 4/13/2017	RPD ¹	Rinse Blank	USEPA RSLs ² Resident	USEPA RSLs ² Industrial
Semi-Volatile Organic Compounds (Continued)						
Butyl benzyl phthalate	< 100	< 100	NC ³	< 1.8	290000	1200000
Carbazole	40 J	< 73	NC ³	< 0.89	--	--
Chrysene	150	120	22%	< 0.18	16000	290000
Dibenz(a,h)anthracene	20	27	30%	< 0.18	16	290
Dibenzofuran	260	190	31%	< 0.89	73000	1000000
Diethyl phthalate	< 100	< 100	NC ³	1.5 J	51000000	660000000
Dimethyl phthalate	< 100	< 100	NC ³	< 1.8	--	--
Di-n-butyl phthalate	< 100	< 100	NC ³	1.1 J	6300000	82000000
Di-n-octyl phthalate	< 100	< 100	NC ³	< 1.8	630000	8200000
Fluoranthene	180	140	25%	< 0.18	2400000	30000000
Fluorene	37	28	28%	< 0.18	2400000	30000000
Hexachlorobenzene	< 9.6	< 9.8	NC ³	< 0.89	210	960
Hexachlorobutadiene	< 72	< 73	NC ³	< 0.89	1200	5300
Hexachlorocyclopentadiene	< 470 R	< 480 R	NC ³	< 8.9	1800	7500
Hexachloroethane	< 72	< 73	NC ³	< 0.89	1800	8000
Indeno(1,2,3-cd)pyrene	62	64	3%	< 0.18	160	2900
Isochlorone	< 72	< 73	NC ³	< 0.89	570000	2400000
Naphthalene	870	650	29%	< 0.18	3800	17000
Nitrobenzene	< 140	< 150	NC ³	< 0.89	5100	22000
N-Nitroso-di-n-propylamine	< 72	< 73	NC ³	< 0.89	78	330
N-Nitrosodiphenylamine	< 72	< 73	NC ³	< 0.89	110000	470000
Pentachlorophenol	< 220	< 220	NC ³	< 36	1000	4000
Phenanthrene	640	540	17%	< 0.18	--	--
Phenol	< 72	< 73	NC ³	< 0.89	19000000	250000000
Pyrene	190	170	11%	< 0.18	1800000	23000000

All values in ug/Kg, except Rinse Blank (ug/L)

¹ RPD - Relative Percent Difference

² USEPA, Region 9, Regional Screening Levels (RSL); May 2016 (revised); THQ = 1.0

³ NC - Not Calculable

Bold - Quantified Result

J = Estimated result less than practical quantitation limit and greater than method detection limit

R = Rejected value based on data validation results

APPENDIX A – REFERENCE LIST

CH2M Hill; 1988 - Feasibility Study Report - Summit National Superfund Site - February 10, 1988

CH2M Hill; 1988 - Remedial Investigation Report - Summit National Superfund Site - January 11, 1988

Eagon & Associates; 2013 through 2017 - Annual Progress Reports - Summit National Superfund Site

Conestoga-Rovers & Associates; 1993 - Final Design Report - Summit National Superfund Site - May 27, 1993

Conestoga-Rovers & Associates; 2013 - Groundwater Monitoring Reports - Summit National Superfund Site

Eagon & Associates; 2016 through 2017 - Groundwater Monitoring Reports - Summit National Superfund Site

Conestoga-Rovers & Associates; 1994 through 2008 - Hydraulic Monitoring Reports - Summit National Superfund Site

Conestoga-Rovers & Associates; 1999 - Interim Evaluation of Remedial Action - Summit National Superfund Site - March 4, 1999

Conestoga-Rovers & Associates; 1995 - Operation, Maintenance and Monitoring Plan - Summit National Superfund Site - November 3, 1995

Conestoga-Rovers & Associates; 1995 - Remedial Action Report - Summit National Superfund Site - October 31, 1995

Ohio EPA; 1998 - Five Year Review Report - Summit National Superfund Site - October 21, 1998

Ohio EPA; 1998 - Second Five Year Review Report - Summit National Superfund Site - September 22, 2003

Ohio EPA; 1994 - Substantive Permit to Discharge- Summit National Superfund Site - May 18, 1994

Summit National Facility Trust; 1994 through 2008 - Monthly Effluent Reports for the Groundwater Treatment Plant - Summit National Superfund Site

United States Environmental Protection Agency; 2001 - Comprehensive Five-Year Review Guidance, June 2001 - Office of Solid Waste and Emergency Response (OSWER) Directive 9355.7-03B-P

United States Environmental Protection Agency; 1988 - EPA Superfund Record of Decision: Summit National Superfund Site - June 30, 1988

United States Environmental Protection Agency; 1990 - EPA Superfund Record of Decision: Summit National Superfund Site - November 2, 1990

United States Environmental Protection Agency; 1992 - Explanation of Significant Differences Summit National Superfund Site - March 23, 1992

United States Environmental Protection Agency; 2013 - Fourth Five Year Review Report - Summit National Superfund Site - July 16, 2013

Consent Decree (Civil Action number C81-1961) - Summit National Superfund Site - June 11, 1991

APPENDIX B – ENVIRONMENTAL COVENANT

2013/2140

RECEIVED FOR RECORD

6-5 2013

AT 15-4928
BONNIE M. HOWE
PORTAGE COUNTY RECORDER

FEE 116.00

To be recorded with Deed Records
Ohio Rev. Code § 317.08

ENVIRONMENTAL COVENANT

This Environmental Covenant is made as of the 23rd day of April, 2013, by and among Owner John Vasi, Deceased, (as further identified below) and Holder, John Vasi, Deceased, (as further identified below) pursuant to Ohio Revised Code § 5301.80 to 5301.92 for the purpose of subjecting the Site (described below) to the activity and use limitations and to the rights of access described below.

Whereas, pursuant to Section 105 of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), 42 U.S.C. § 9605, the United States Environmental Protection Agency ("EPA"), placed the Summit National Superfund Site ("Site") on the National Priorities List, set forth at 40 C.F.R. Part 300, Appendix B, by publication in the *Federal Register* on September 15, 1983; and

Whereas, in a Remedial Action/Feasibility Study (RI/FS) completed on June 30, 1988, EPA found the following contaminants had been released into the soil and sediment at the Site: methylene chloride, acetone, carbon disulfide, 1,1-dichloroethene, 1,1-dichloroethane, trans-1,2-dichloroethene, 1,2-dichloroethane, 2-butanone, 1,1,1-trichloroethane, trichloroethene, benzene, 4-methyl-2-pentanone, tetrachloroethene, toluene, chlorobenzene, ethylbenzene, xylenes, phenol, 1,4-dichlorobenzene, 1,2-dichlorobenzene, isophorone, 1,2,4-trichlorobenzene, naphthalene, 2-methylnaphthalene, fluorine, hexachlorobenzene, phenanthrene, di-n-butylphthalate, butylbenzylphthalate, bis-2-ethylhexylphthalate, di-n-octylphthalate, indeno(1,2,3-c,d)pyrene, dibenz(a,h)anthracene, benzo(g,h,i)perylene, 4,4-DDT, PCBs, n-nitrosodiphenylamine, arsenic, barium, beryllium, chromium, copper, mercury, and cyanide. In the same RI/FS, EPA found the following contaminants had been released into the groundwater at the Site: methylene chloride, acetone, 1,1-dichloroethane, 1,2-dichloroethane, 2-butanone, 1,1,1-trichloroethane, trichloroethane, 4-methyl-2-pentanone, toluene, ethylbenzene, 1,1-dichloroethene, 4-methylphenol, 2,4-dimethylphenol, 4-chloro-3-methylphenol, phenol, isophorone, naphthalene, 2-methylnaphthalene, bis-2-ethylhexylphthalate, pyrene, dimethylphthalate, di-n-octylphthalate, acenaphthalene, dibenzofuran, diethylphthalate, trans-1,2-dichloroethene, benzene, xylenes, tetrachloroethene, fluorine, hexachlorobenzene, phenanthrene, anthracene, di-n-butylphthalate, fluoranthene, butylbenzylphthalate, hexachlorocyclopentadiene, aluminum, arsenic, barium, cadmium, chromium, manganese, nickel, tin, and barium. In the same RI/FS, EPA found the following contaminants had been released into the surface water at the Site: methylene chloride, acetone, 1,1-dichloroethane, 1,2-dichloroethane, 2-butanone, 1,1,1-trichloroethane, 4-methyl-2-pentanone, tetrachloroethene, toluene, chlorobenzene, xylenes, phenol, aniline, 1,4-dichlorobenzene, 1,2-dichlorobenzene, hexachloroethane, isophorone, benzoic acid, bis-2-ethylhexylphthalate, benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(a)pyrene, indeno(1,2,3-c,d)pyrene, dibenz(a,h)anthracene, benzo(g,h,i)perylene, arsenic barium, beryllium, cadmium, chromium, and nickel; and

Whereas, EPA issued a Record of Decision ("ROD") on June 30, 1988, and whereas EPA issued an amended ROD on November 2, 1990, which called for the expansion of Site boundaries to encompass contaminated areas along the perimeters; construction of fencing around the expanded boundary; excavation and on-Site incineration of contaminated materials; demolition of on-Site structures for on-Site disposal; collection and treatment of surface water; extraction of groundwater; relocation of a vacant residence; testing of incinerated waste material before replacement on Site; regrading and installation of a soil cover; re-routing of drainage ditches; and institutional controls to limit the future use of the property where remedial construction has occurred and to protect the performance of the remedy, and to prevent the exposure of humans or the environment to contaminants; and

Whereas on February 15, 1987, EPA issued a Unilateral Administrative Order to various potentially responsible parties, and on June 11, 1991, a Remedial Action Consent Decree ("Consent Decree") was entered which provided for the implementation of the remedial action selected in the November 2, 1990, ROD, and whereas, with the exception of the institutional controls, the remedial action has been implemented at the Site; and

Whereas, the parties hereto have agreed: 1) to grant a permanent right of access over the Site to the Access Grantees (as hereafter defined) for purposes of implementing, facilitating and monitoring the remedial action, and 2) to impose on the Site activity and Use Limitations as covenants that will run with the land for the purpose of protecting human health and the environment; and

Now therefore, Owner and EPA agree to the following:

1. Environmental Covenant. This instrument is an environmental covenant executed and delivered pursuant to Ohio Rev. Code § 5301.80 to 5301.92. EPA is the Agency, as defined by Ohio Rev. Code § 5301.80(B), that approved the environmental response project pursuant to which this environmental covenant is created. Pursuant to Ohio Rev. Code § 5301.81(B), any right of EPA under this environmental covenant is not an interest in real property.

2. Site. The one (1) parcel of real property which contains 11.5 acres located in Deerfield Township, Portage County, Ohio, which is subject to the environmental covenants set forth herein is described on **Exhibit A** attached hereto and hereby by reference incorporated herein. The Site is outlined by heavy black line on the copy of the Portage County, Ohio, Auditor's tax map (the "Map") attached hereto as **Exhibit B**.

3. Owner. John Vasi, Deceased, born March 1912 and died October 24, 1994 ("Owner"), who resided at 1012 Clearview Avenue, Akron, Ohio, is the current record owner of the Site. Owner is the Owner Settling Defendant named in the Consent Decree (described in Paragraph 10 below). Arthur R. Hollencamp was appointed receiver on April 22, 2013, in United States v. John Vasi, et al., Case No. 5:90-CV-1167 (N.D. Ohio) in order to execute this Environmental Covenant on behalf of Owner.

4. Holder. John Vasi, born in March 1912 and died on October 24, 1994, who resided at 1012 Clearview Avenue, Akron, Ohio.

5. Activity and Use Limitations on the Site.

- (a) Owner agrees for himself and his successors in title not to permit the Site to be used in any manner that would interfere with or adversely affect the integrity or protectiveness of the remedial action which has been implemented pursuant to the Consent Decree unless the written consent of the EPA to such use is first obtained. Owner's agreement to restrict the use of the Site shall include, but not be limited to, not permitting any filling, grading, excavating, building, drilling, mining, farming, or other development on property on the Restricted Area unless the written consent of EPA to such use or activity is first obtained.
- (b) Owner covenants for himself and his successors and assigns that there shall be no consumptive use of Site groundwater, including use, extraction, or development of said groundwater, either on or off the Site, until cleanup standards are achieved.
- (c) Owner covenants for himself and his successors and assigns that there shall be no use of surface water contained within the Site for any purpose.
- (d) Owner covenants for himself and his successors and assigns that there shall not be any inconsistent uses on the Site that will interfere with remedial action components or otherwise harm the integrity of the remedy components.

6. Running with the Land. This Environmental Covenant shall be binding upon the Owner and all assigns and successors in interest, including any Transferee, and shall run with the land, pursuant to Ohio Rev. Code § 5301.85, subject to amendment or termination as set forth herein. The term "Transferee," as used in this Environmental Covenant, shall mean any future owner of any interest in the Site or any portion thereof, including, but not limited to, owners of an interest in fee simple, mortgagees, easement holders, and/or lessees.

7. Requirements for Notice to EPA Following Transfer of a Specified Interest in, or Concerning Proposed Changes in the Use of, Applications for Building Permits for, or Proposals for any Work Affecting Contamination on the Site. Neither Owner nor any Holder shall transfer any interest in the Site, or make proposed changes in the use of the Site, or make applications for building permits for, or proposals for any work in the Site without first providing notice to EPA and obtaining any approvals or consents thereto that are required under the Consent Decree.

8. Access to the Site. Pursuant to Section V of the Consent Decree, Owner agrees that EPA, the Ohio EPA and the Settling Defendants, their successors and assigns, and their respective officers, employees, agents, contractors, and other invitees (collectively, "Access Grantees") shall have and hereby grant to each of them an unrestricted right of access to the Site to undertake the Permitted Uses described in Paragraph 9 below and, in connection therewith, to use all roads, drives, and paths, paved or unpaved, located on the Site or off the Site ("off-site") and rightfully used by Owner and Owner's invitees for ingress to or egress from portions of the Site (collectively, "Access Roads"). The right of access granted under this Paragraph 8 shall be

irrevocable while this Covenant remains in full force and effect. The Settling Defendants are named on Exhibit C attached hereto.

9. Permitted Uses. The right of access granted under Paragraph 8 of this Environmental Covenant shall provide Access Grantees with access at all reasonable times to the Site, or such other property, for the purpose of conducting any activity related to the Consent Decree or the purchase of the Site, including, but not limited to, the following activities:

- a) Monitoring the Work;
- b) Verifying any data or information submitted to the United States or the State;
- c) Conducting investigations relating to contamination at or near the Site;
- d) Obtaining samples;
- e) Assessing the need for, planning, or implementing response actions at or near the Site;
- f) Implementing the Work pursuant to the Consent Decree;
- g) Inspecting and copying records, operating logs, contracts, or other documents maintained or generated by Owner or his agents, consistent with Section XV (Retention and Availability of Information) of the Consent Decree;
- h) Assessing Settling Defendants' compliance with the Consent Decree;
- i) Determining whether the Site or other property is being used in a manner that is prohibited or restricted or that may need to be prohibited or restricted by or pursuant to the Consent Decree;
- j) Surveying and making soil tests of the Site, locating utility lines, and assessing the obligations which may be required of a prospective purchaser by EPA under the Consent Decree; and
- k) Enforcing and Maintaining Compliance with the Environmental Covenant.

10. Administrative Record. Copies of the EPA administrative record for the Summit National Superfund Site are maintained at the following locations: EPA Region 5, Superfund Records Center (7th Floor), 77 W. Jackson Blvd., Chicago, Illinois 60604; [Union Township Library, 7900 Cox Road, West Chester, Ohio 45069; and Union Township Hall, 9113 Cincinnati-Dayton Road, West Chester, Ohio 45069].

11. Notice upon Conveyance. Each instrument hereafter conveying any interest in the Site or any portion of the Site shall contain a notice of the activity and use limitations, and grants of access set forth in the Environmental Covenant, and provide the recorded location of this Environmental Covenant. For instruments conveying any interest in the Site or any portion thereof, the notice shall be substantially in the form set forth in Exhibit D.

12. Amendments; Early Termination. This Environmental Covenant may be modified or amended or terminated while Owner owns the property only by a writing signed by Owner and EPA with the formalities required for the execution of a deed in Ohio which is recorded in the Office of the Recorder of Portage County, Ohio. Upon transfer of all or any portion of the Site, Owner waives any rights that he might otherwise have under Section 5301.90 of the Ohio Rev. Code to withhold his consent to any amendments, modifications, or termination of this Environmental Covenant, to the extent that he has transferred his interest in that portion of the Site affected by said modification, amendment, or termination. The rights of Owner's successors in interest as to a modification, amendment, or termination of this Environmental Covenant are governed by the provisions of Section 5301.90 of the Ohio Rev. Code.

13. Other Matters.

- (a) Representations and Warranties of Owner. Owner represents and warrants; that Owner is the sole owner of the Site; that Owner holds fee simple title to the Site, which is free, clear, and unencumbered except for the Consent Decree; that Owner has the power and authority to make and enter into this Agreement as Owner and Holder, to grant the rights and privileges herein provided and to carry out all obligations of Owner and Holder hereunder; that this Agreement has been executed and delivered pursuant to the Consent Decree; and that this Agreement will not materially violate or contravene or constitute a material default under any other agreement, document or instrument to which Owner is a party or by which Owner may be bound or affected.
- (b) Right to Enforce Agreement Against Owner; Equitable Remedies. In the event that Owner or any other person should attempt to deny the rights of access granted under Paragraph 8 or should violate the restrictions on use of the Site set forth in Paragraph 5, then, in addition to any rights which EPA may have under the Consent Decree, EPA or any Settling Defendant that is adversely affected by each denial (for example, any Settling Defendant that is prevented from conducting its remedial obligations under the Consent Decree) or by such violation shall have the right to immediately seek an appropriate equitable remedy and any court having jurisdiction is hereby granted the right to issue a temporary restraining order and/or preliminary injunction prohibiting such denial of access or use in violation of restrictions upon application by EPA or by such adversely affected Settling Defendant without notice or posting bond. Owner and each subsequent owner of the Site by accepting a deed thereto or to any part thereof waives all due process or other constitutional right to

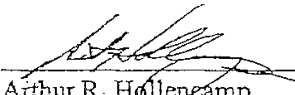
notice and hearing before the grant of a temporary restraining order and/or preliminary injunction pursuant to this Subsection 13(b).

- (c) Future Cooperation; Execution of Supplemental Instruments. Owner agrees to cooperate fully with EPA and/or the Settling Defendants and to assist them in implementing the rights granted them under this Environmental Covenant and, in furtherance thereof, agrees to execute and deliver such further documents as may be requested by EPA to supplement or confirm the rights granted hereunder.
- (d) Cumulative Remedies; No Waiver. All of the rights and remedies set forth in this Environmental Covenant or otherwise available at law or in equity are cumulative and may be exercised without regard to the adequacy of, or exclusion of, any other right, remedy or option available hereunder or under the Consent Decree or at law. The failure to exercise any right granted hereunder, to take action to remedy any violation by Owner of the terms hereof, or to exercise any remedy provided herein shall not be deemed to be a waiver of any such right or remedy and no forbearance on the part of EPA and no extension of the time for performance of any obligations of Owner hereunder shall operate to release or in any manner affect EPA's rights hereunder.
- (e) Severability. If any provision of this Environmental Covenant is found to be unenforceable in any respect, the validity, legality, and enforceability of the remaining provisions shall not in any way be affected or impaired.
- (f) Recordation. Within thirty (30) days after the date of the final required signature upon this Environmental Covenant, Owner shall file this Environmental Covenant for recording, in the same manner as a deed to the Site, with the Portage County Recorder's Office.
- (g) Effective Date. The effective date of this Environmental Covenant shall be the date upon which the fully executed Environmental Covenant has been recorded as a deed record for the Site with the Portage County Recorder.
- (h) Distribution of Environmental Covenant/Other Notices. The Owner shall distribute a file-stamped and date-stamped copy of the recorded Environmental Covenant to: Ohio EPA, Portage County, each person holding a recorded interest in the Site, and the Settling Defendants.
- (i) Notices – All notices, requests, demands, or other communications required or permitted under this Environmental Covenant shall be given in the manner and with the effect set forth in the Consent Decree.

- (j) Governing Law. This Environmental Covenant shall be construed according to and governed by the laws of the State of Ohio and the United States of America.
- (k) Captions. All paragraph captions are for convenience of reference only and shall not affect the construction of any provision of this Environmental Covenant.
- (l) Time of the Essence. Time is of the essence of each and every performance obligation of Owner under this Environmental Covenant.

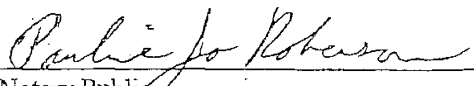
IN WITNESS WHEREOF, Owner and EPA have executed and delivered this Environmental Covenant as of the date first above written.

OWNER


Arthur R. Hollencamp
Hollencamp & Hollencamp, Attorneys
Receiver for John Vasi

STATE OF OHIO)
) SS.
COUNTY OF Montgomery)

The foregoing instrument was acknowledged before me this 23rd day of April, 2013, by Arthur R. Hollencamp, the receiver for John Vasi.


Notary Public



PAULINE JO ROBERSON, Notary Public
In and for the State of Ohio
My Commission Expires Sept. 1, 2013

IN WITNESS WHEREOF, Owner and EPA have executed and delivered this
Environmental Covenant as of the date first above written.

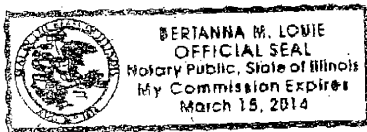
UNITED STATES OF AMERICA
On behalf of the Administrator of the
United States Environmental Protection Agency

By: Richard C. Karl
Richard C. Karl, Director,
Superfund Division, Region 5

STATE OF ILLINOIS)
) SS.
COUNTY OF COOK)

The foregoing instrument was acknowledged before me this 30th day of
APRIL, 2013, by Richard C. Karl, Director, Superfund Division, Region 5 of the
United States Environmental Protection Agency, on behalf of the United States of America.

Bertanna M. Louie
Notary Public



Prepared By:

Steven J. Paffilas
Assistant U.S. Attorney
400 United States Court House
801 W. Superior Avenue
Cleveland, OH 44113-1852

EXHIBIT A

Legal Description of the Site

Known as being part of Lot #56 in Deerfield Township and bounded and described as follows:
Beginning at the northwest corner of Lot X56; thence S. 89 deg. 25' East along the north line of said lot #56, a distance of 811.85 feet, and along the center line of U.S. 224; thence south 0 deg. 52" West 600 feet to an iron pipe and passing over an iron pipe set at 30 feet at the side of the highway; thence N. 89 deg. 25' West 811.85 feet to the west line of Lot #56, and the center line of S.R. 225, and passing over an iron pipe set at 30 feet at the side of highway; thence N 52' East along the west line of said Lot 56, 600 feet to the place of beginning and containing 21.18 acres of Land, more or less.

EXHIBIT B

Portage County, Ohio, Auditor's Tax Map of the Site



EXHIBIT C

List of Settling Defendants

1. Airco, Inc., now known as the BOC Group, Inc.
2. American Cyanamid Company
3. Bechtel-McLaughlin, Inc.
4. Browning-Ferris Industries of Ohio, Inc.
5. Browning-Ferris Industries of Pennsylvania, Inc.
6. Canton Drop Forge, Inc., a subsidiary of Cordier Group,
parent company, Cordier Holdings
7. Columbia Gas Transmission Corporation
8. Container Corporation of America
9. E.I. DuPont de Nemours & Company
10. Erieway Inc., formerly known as Erieway Pollution Control, Inc.
11. Bridgestone/Firestone, Inc., formerly known as The Firestone Tire & Rubber
Company
12. Ford Motor Company
13. General Motors Corporation
14. Gencorp, Inc., formerly known as General Tire and Rubber Company and/or
Diversitech General
15. Divested Aerospace Corporation, successor in interest to Goodyear Aerospace
Corporation and subsidiary of Loral Corporation
16. Goodyear Tire and Rubber Company
17. Gould, Inc., now owned by Nippon Mining U.S., Inc.
18. Occidental Chemical Corporation, formerly known as Hooker Chemicals and
Plastics Corporation
19. Safety Kleen Envirosystems Company, formerly known as McKesson
Envirosystems Company, formerly known as Inland Chemical Corporaton
20. Mobil Oil Corporation
21. Morgan Adhesives Company

EXHIBIT D

Notice Upon Conveyance of Site or any Portion Thereof

THE INTEREST CONVEYED HEREBY IS SUBJECT TO A CONSENT DECREE DATED JUNE 11, 1991, WHICH WAS RECORDED IN THE OFFICE OF THE PORTAGE COUNTY RECORDER, OR BOOK _____, Pages _____, AND WHICH RESTRICTS THE INTEREST CONVEYED AS SET FORTH IN THIS NOTICE AND AN ENVIRONMENTAL COVENANT, DATED _____, 2013, RECORDED IN THE DEED OR OFFICIAL RECORDS OF THE PORTAGE COUNTY RECORDER ON _____, 2013, in BOOK _____, Pages _____. THE ENVIRONMENTAL COVENANT CONTAINS THE FOLLOWING ACTIVITY AND USE LIMITATIONS AND ACCESS RIGHTS:

Activity and Use Limitations on the Site.

- (a) The Site shall not be used in any manner that would interfere with or adversely affect the integrity or protectiveness of the remedial action which has been implemented or which will be implemented pursuant to the Consent Decree unless the written consent of the EPA to such use is first obtained.
- (b) There shall be no consumptive use of Site groundwater, including use, extraction, or development of said groundwater, either on or off the Site, until cleanup standards are achieved.
- (c) There shall be no use of surface water contained within the Site for any purpose.
- (d) There shall not be any inconsistent uses on the Site that will interfere with other remedial action components or otherwise harm the integrity of the remedy components

Access to the Site. Pursuant to Sections V and X of the Consent Decree and the Environmental Covenant, EPA and the Settling Defendants, their successors and assigns, and their respective officers, employees, agents, contractors, and other invitees (collectively, "Access Grantees") shall have an unrestricted right of access to the Site to undertake the Permitted Uses described below and, in connection therewith, to use all roads, drives, and paths, paved or unpaved, located on the Site or off-site. The right of access set forth above shall be irrevocable while the Environmental Covenant remains in full force and effect. The Settling Defendants are named in Exhibit C of the Environmental Covenant.

Permitted Uses. The right of access granted under the Environmental Covenant shall provide Access Grantees with access at all reasonable times to the Site, or such other property, for the purpose of conducting any activity related to the Consent Decree or the purchase of the Site, including, but not limited to, the following activities:

- a) Monitoring the Work;
- b) Verifying any data or information submitted to the United States or the State;

- c) Conducting investigations relating to contamination at or near the Site;
- d) Obtaining samples;
- e) Assessing the need for, planning, or implementing response actions at or near the Site;
- f) Implementing the Work pursuant to the Consent Decree;
- g) Inspecting and copying records, operating logs, contracts, or other documents maintained or generated by Owner or his agents, consistent with Section XV (Retention and Availability of Information) of the Consent Decree;
- h) Assessing Settling Defendants' compliance with the Consent Decree;
- i) Determining whether the Site or other property is being used in a manner that is prohibited or restricted, or that may need to be prohibited or restricted, by or pursuant to the Consent Decree;
- j) Surveying and making soil tests of the Site, locating utility lines, and assessing the obligations which may be required of a prospective purchaser by EPA under the Consent Decree; and
- k) Enforcing and maintaining compliance with the Environmental Covenant.

APPENDIX C – NEWSPAPER AD



Employee is irked by colleagues' work ethics

DEAN ABBY: I am almost 62 and struggling to get through the day at work. It's not because of the work itself, but I am extremely unhappy in the work environment. I have been here more than 20 years, and I have a real problem with the work ethic of the younger employees. They come in to work anywhere from a half-hour to two hours late. One of them takes hour-long breaks, two-hour lunches and then leaves early. Another comes to work and complains nonstop about her drive, her car and all her aches and pains. (She just turned 40.) I go home every night frustrated and so stressed out I snap at my poor husband. I really want to retire. It wouldn't be a financial burden, although we would have to cut back on a little spending. My husband won't offer an opinion, but I know I'd be much happier and healthier if I did. Any advice? — **STRESSED AND TIRED**

DEAR STRESSED: You might be happier and healthier if, rather than retire early, you talked to a licensed mental health professional about how to manage your stress. You can't control the behavior (or misbehavior) of your younger coworkers. That's your boss's responsibility. And your lack of punctuality and poor attendance doesn't bode well for your employer, you should not be letting it affect you.

And as to the woman who complains about her aches, her pains and her car — why are you listening to that garbage? You have only a few more years until you reach the age at which you can retire with all the benefits you have earned — and without having to cut back. Please consider what I have said and ride it out.

DEAR ABBY: I recently had a phone conversation with a cousin who lives on the other side of the country. We talk once a month. She has always been judgmental and negative about our cousins, aunts, uncles, etc. — who — for the most part — are the rarely communicates with in the past when she would put them down. I'd on the conversation short because I didn't want to listen.

During our last chat, she started in on my brother. That's when I lost it. I gave her a piece of my mind and hung up. Since then, she has texted and called a few times, but I haven't responded.

I feel bad for what happened, but at the same time, I refuse to listen to her talk badly about and judge other family members. How should I handle this? Should I respond to her? In one of her texts she said she "didn't want to upset me," but I don't consider that an apology.

HATES JUDGMENT IN OHIO

DEAR HATES: JUDGMENT: Yes, you should respond to your cousin. She needs to understand you are changing the rules regarding further conversations with her.

Explain it but always make you uncomfortable when she said unkind, judgmental things about family members, and that when she started in on your brother, you finally reached your limit. Tell her that in the future when you talk, it must be about positive things and not family members. After that, the ball will be in her court. See if she follows through.



Martha H. Budd

1951-2018

Martha H. Budd, age 67 of Ravenna, passed away Saturday, February 17, 2018, at home after a courageous 17-month battle with cancer. She was born February 8, 1951 in Cleveland, Ohio to the late Michael A. and Hedwig (Brhel) Kaa. Martha is survived by her best friend and husband of 43 years, David O. Budd, her sister, Ann Timothy J. (Christina) Budd from Green, Ohio, her beloved daughter Carolyn A. (Nadine) Kelly, Budd from Springfield, Ohio, and her five grandchildren: Gabriel, McKinley, Reagan, Elijah, and Monroe. She is also survived by her four brothers, Michael (Janet) Kaa, Timothy (Beverly) Kaa, Gregory (Patricia) Kaa, and Joseph (Bernadette) Kaa, and her sister Margaret (Dennis) McGarry, and many treasured nephews and nieces.

Martha cherished her family and enjoyed spending time with her grandchildren. Her favorite pastimes included traveling, collecting antiques, enjoying music, appreciating the beauty of the outdoors, and dominating all trivia games. She was a devout parishioner of Immaculate Conception Church for the past 40 years.

Martha graduated from Kent State University in 1973 with a degree in education, which allowed her to fulfill her lifetime dream of becoming a teacher. Over her 30-year career, she taught at St. Anthony of Padua (Parma), Immaculate Conception (Ravenna), and St. Patrick (Kent). She had the amazing ability to connect with all her students while bringing out



the best in each of them. Her favorite subject to teach was middle school science, for which she won multiple awards.

Calling hours will be held on Wednesday, February 21, 2018 from 5:00 PM to 8:00 PM at Sports Spicer Crisp Funeral Homes Ravenna Chapel 141 N. Meridian St. Ravenna, OH 44260. Funeral Mass on Thursday, February 22, 2018 10 AM at Immaculate Conception Church 418 W. Main St. Ravenna, OH 44260. Interment will take place at St. Mary Cemetery at a later date. In lieu of flowers, donations can be made on Martha's behalf to the following: GIG's Playhouse of Cauton, a Down syndrome Adjustment Center, online at <http://gigsplayhouse.org/> or the National Organization for Albinism and Hypopigmentation (NOAH), online at www.noah-usa.org/. Burial: Harrison of Tallahassee, Florida; 11 grandchildren; 25 great-grandchildren and 1 great-great-grandchild.

Arrangements are by the Green Family Funeral Home & Crematory Service in Mantua, where condolences and memories may be shared at www.greenfamilyfuneralhome.com.

John J. Bordonaro, Jr.
1936-2018

STREETSBORO: John J. Bordonaro, Jr., 81 years of age, passed away Friday February 16, 2018 at UH-Portage Medical Center in Ravenna, Ohio. Born in Cleveland, Ohio on November 16, 1936, he was the son of the late John J. and Concetta (O'Connell) Bordonaro. St. John was employed for 30 years as head of Security and Maintenance at Cleveland Hix School District from where he retired, after which he worked at LTV Steel as a security guard for 12 years, retiring then from that employment. He had been a Streetsboro resident the past 11 years, formerly of Cleveland Hills. John was an avid gun collector and history buff, and his family and friends will always remember him for his sense of humor.

Survivors include his son Michael, daughter Bonnie Knight of British Columbia, granddaughter Krystal South and grandson Ryan South both of Streetsboro and many dear friends. He was predeceased in death by his son Scott. No calling hours. Private burial is at Lakeview Cemetery in Cleveland, Ohio.

Arrangements are by the Green Family Funeral Home & Crematory Service in Mantua, where condolences and memories may be shared at www.greenfamilyfuneralhome.com.

Man dies after being punched on bar stage
MIDDLETOWN (AP) — Police say a 40-year-old man has died in southwest Ohio after he was knocked backward off a bar's stage.

Middletown police say John Fugate died of a gunshot in Dayton after he hit his head on the concrete floor early Saturday.

Police Maj. Scott Reese tells the Hamilton Journal-News that initial investigation indicates that Fugate was punched.

Reese says police are investigating and will present the case for Butler County grand jury consideration when they are finished.

Friends say Fugate was a musician who worked bands at the Old Crow Bar in Middletown.

Six is the savings limit
Dear Readers: What is "REG D"? Glad you asked! Regulation D is a Federal Reserve (www.federalreserve.gov) banking rule that limits the number of most types of withdrawals you can make from your savings account to six per month.

A savings account is meant primarily as a deposit account — unlike a checking account, where money is constantly coming in and out.

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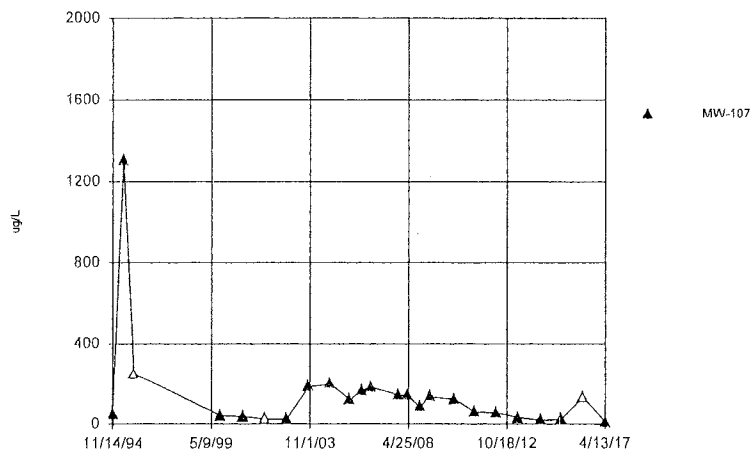
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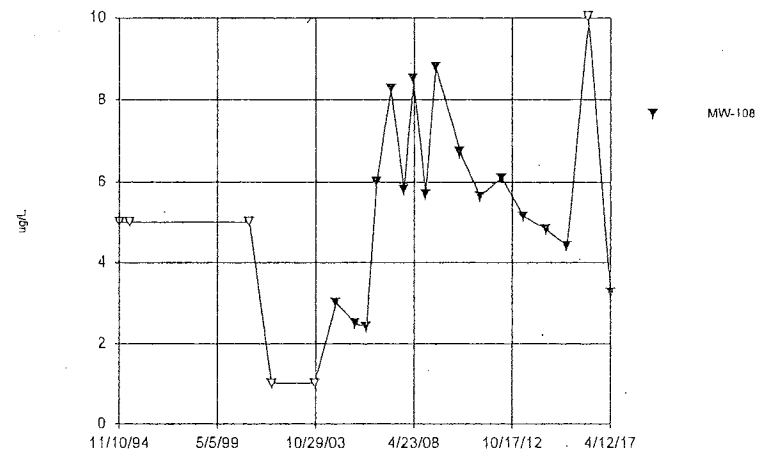
**APPENDIX D – TIME-SERIES PLOTS OF WATER QUALITY
DATA, ANNUAL MONITORING WELLS**

Time Series



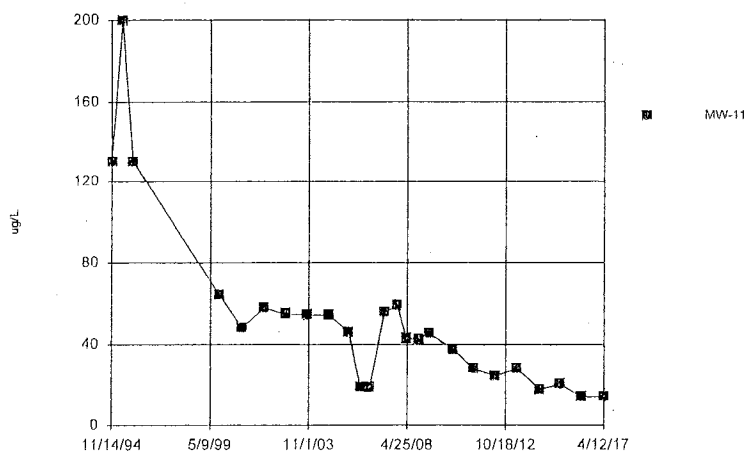
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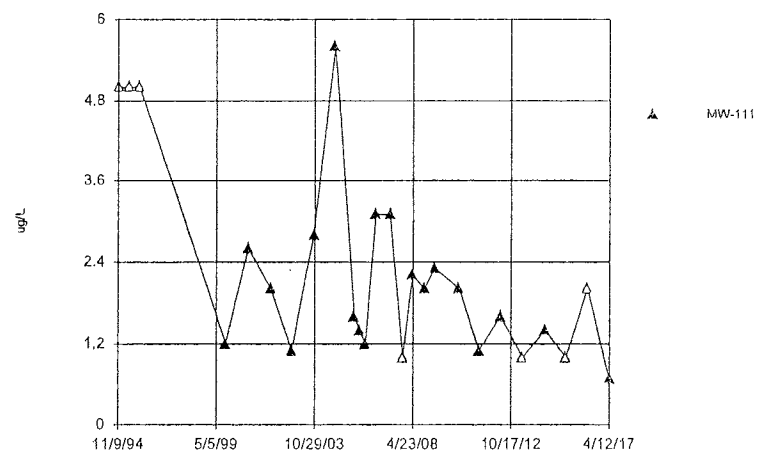
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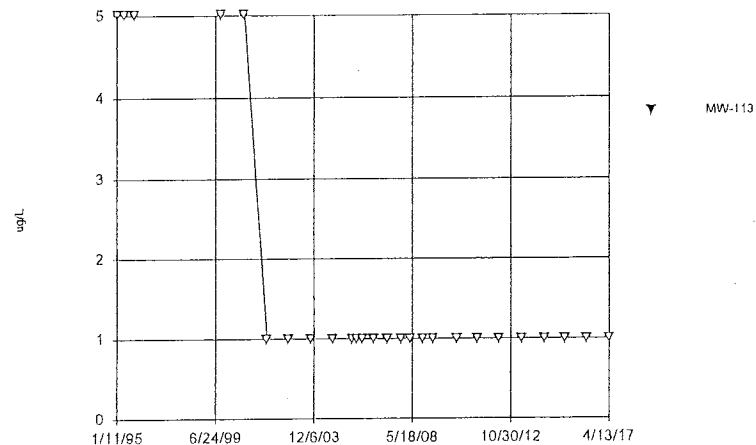
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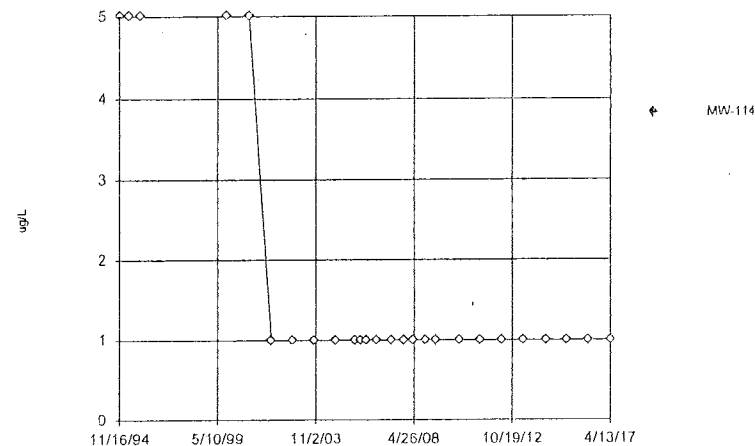
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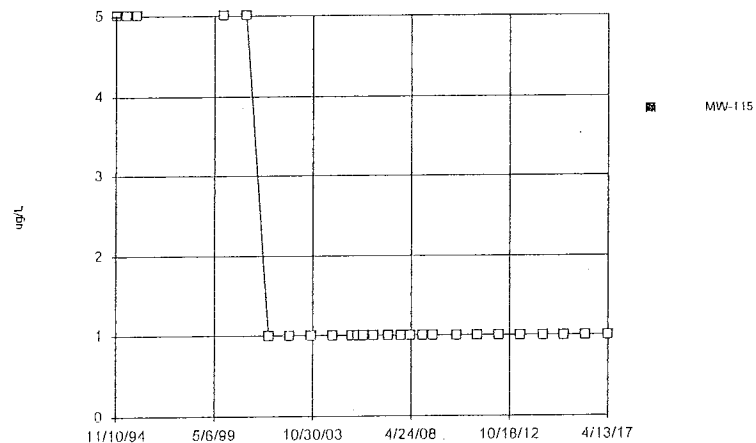
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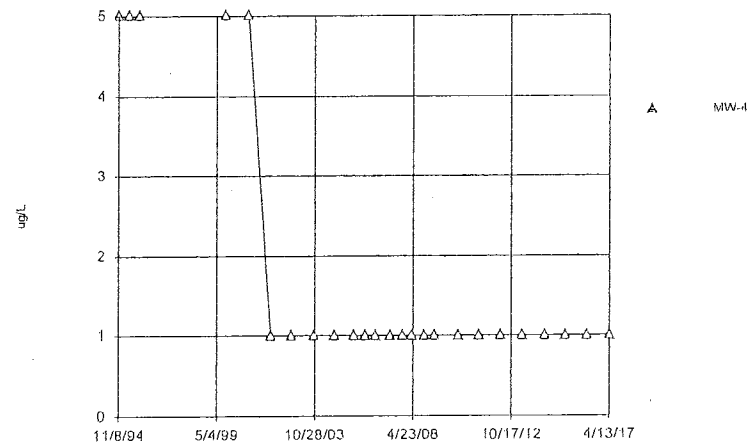
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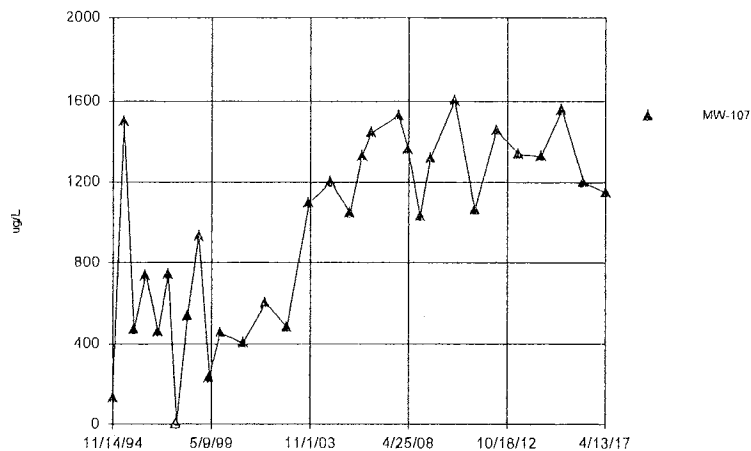
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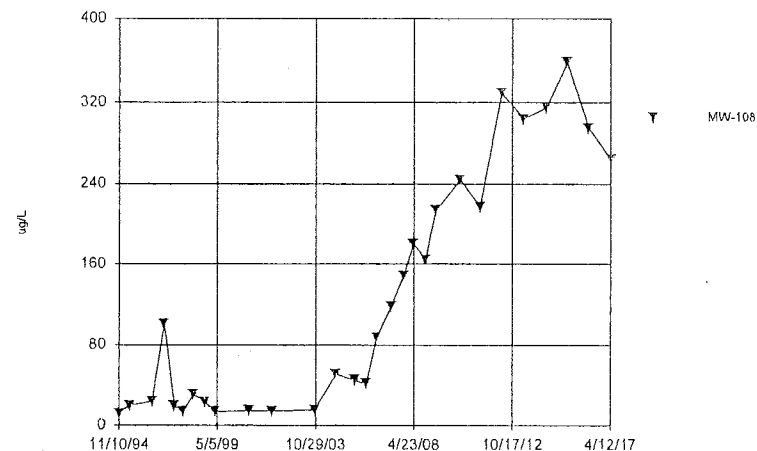
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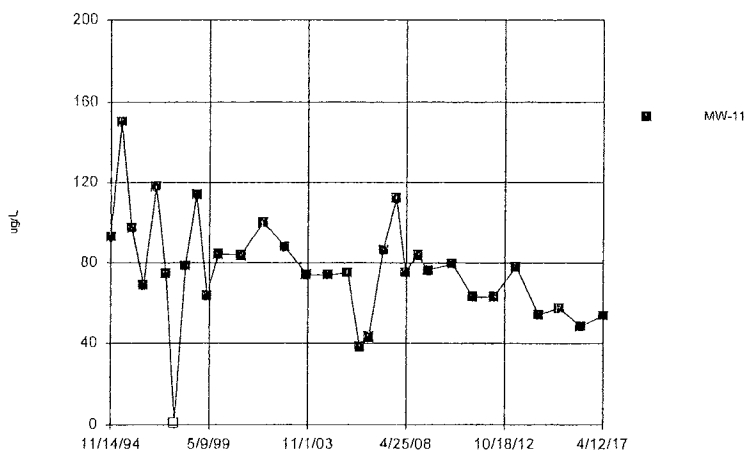
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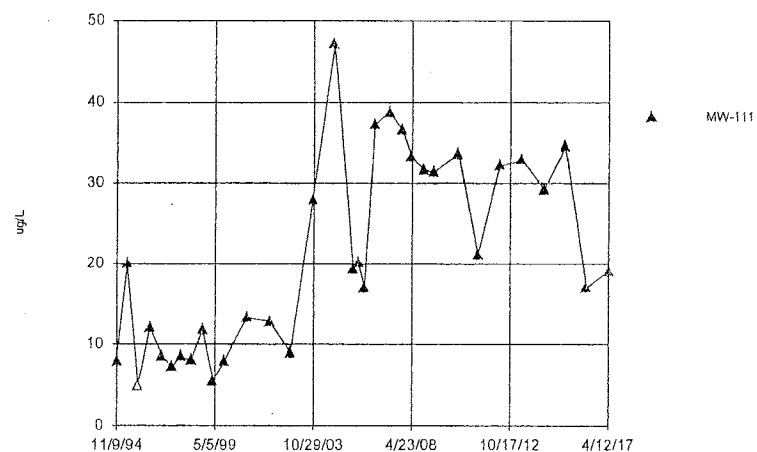
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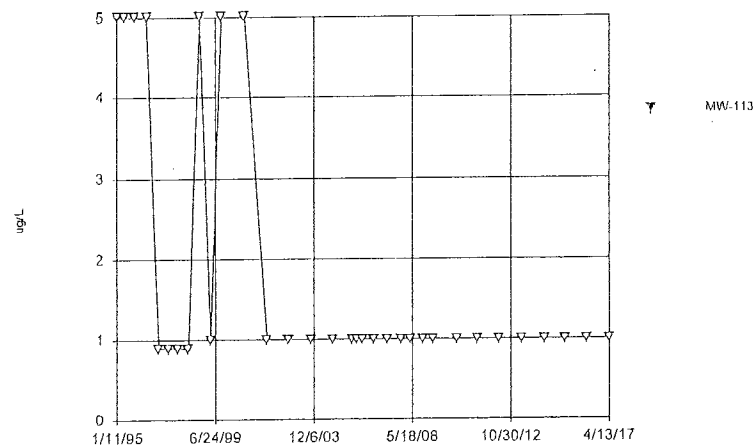
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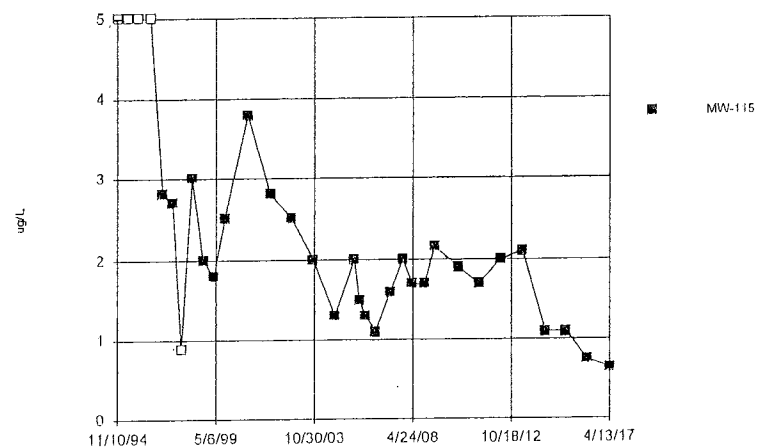
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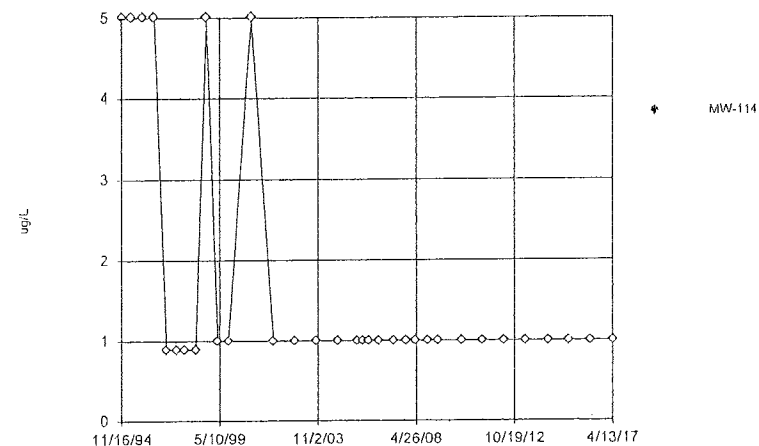
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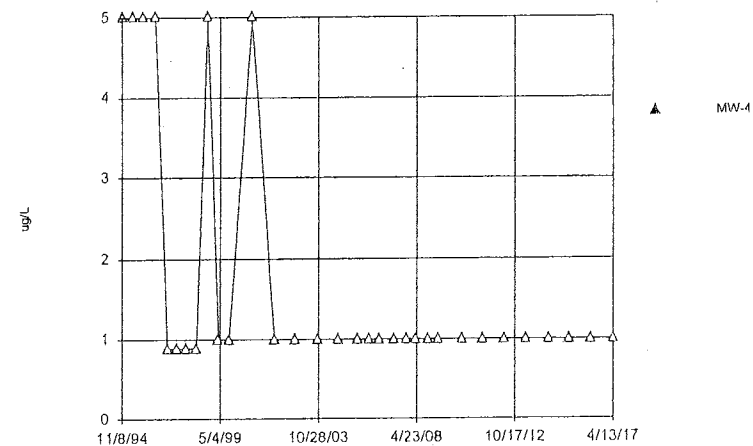
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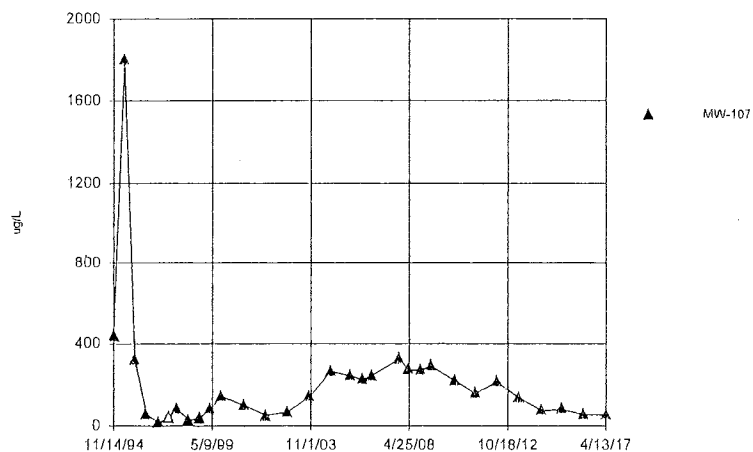
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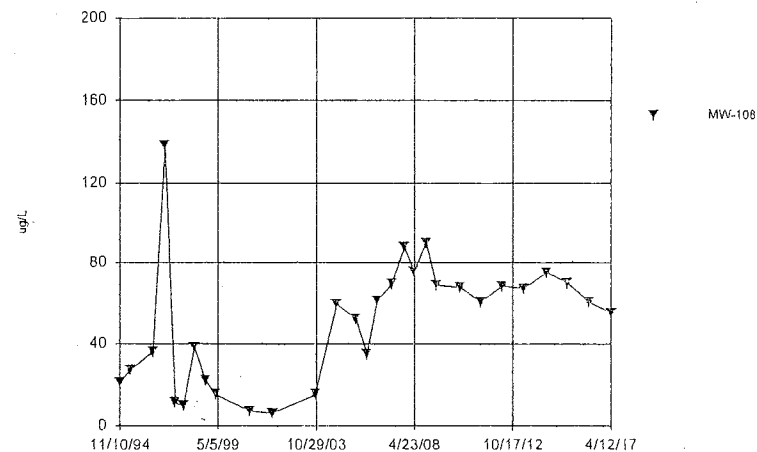
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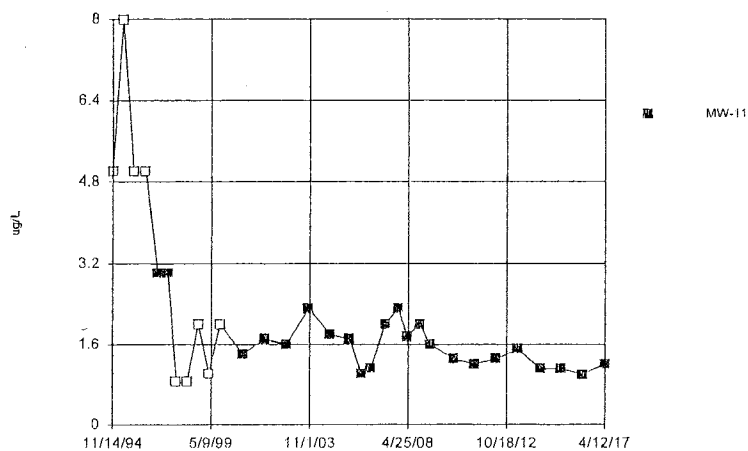
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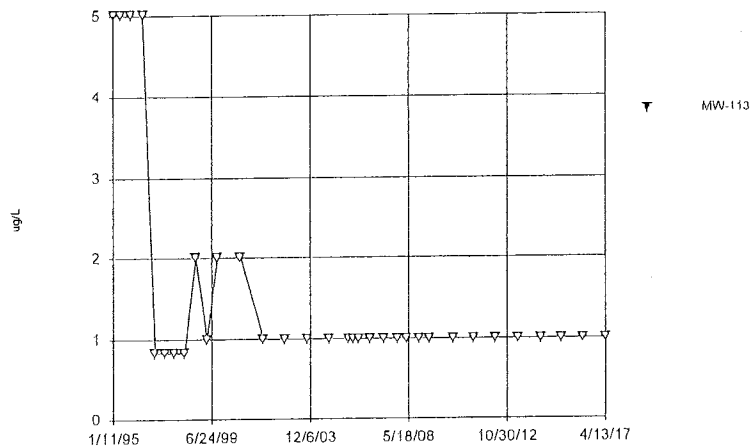
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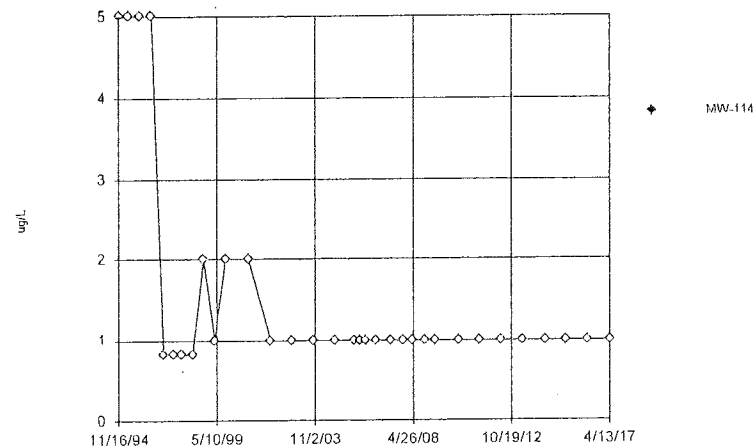
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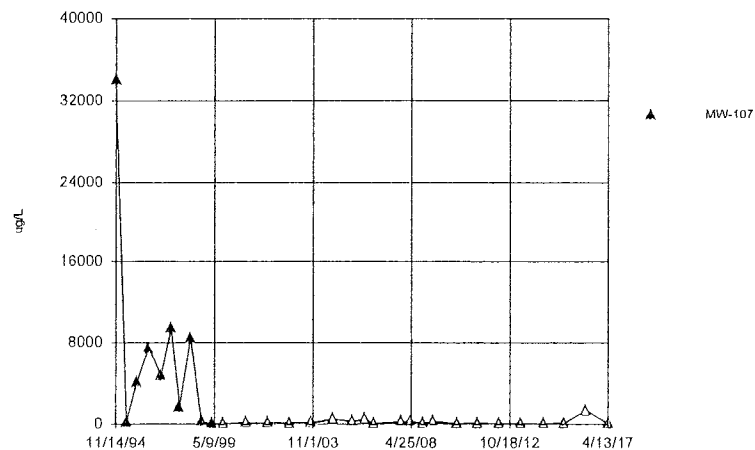
Revlin™ v.9.5.31 Software Licensed to Engin & Associates, Inc. UG
Hollow symbols indicate censored values.

Time Series



RealTime™ v.9.5.31 Software licensed to Egon & Associates, Inc. UG
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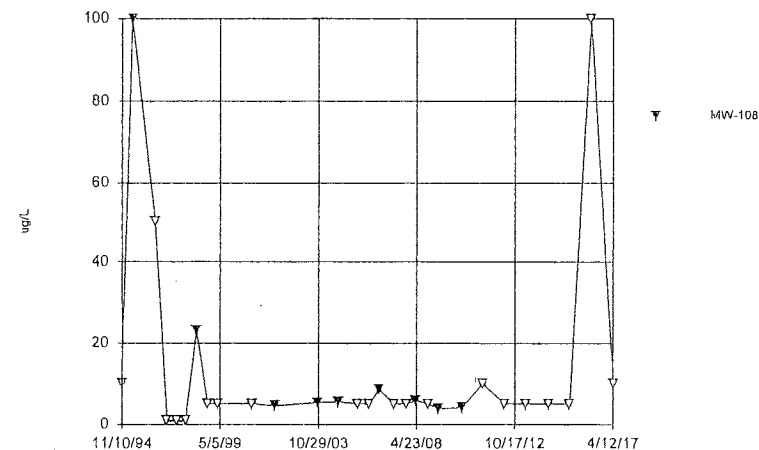
Time Series



Constituent: Acetone Analysis Run 4/28/2017 1:24 PM View: WTU Time Series
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RealTime™ v.9.5.31 Software licensed to Egon & Associates, Inc. UG
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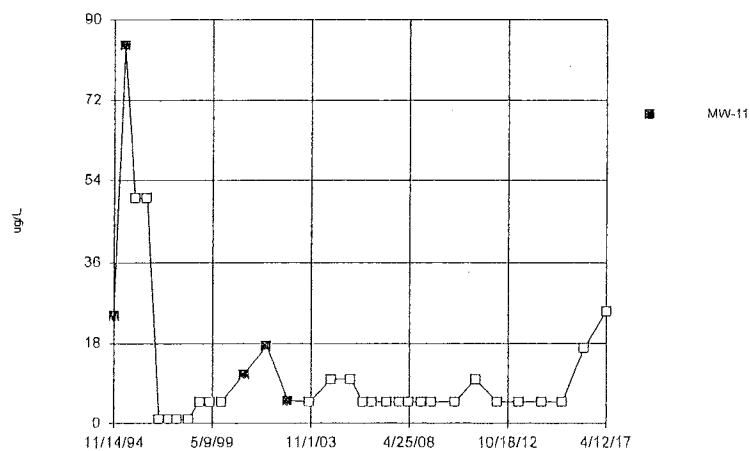
Time Series



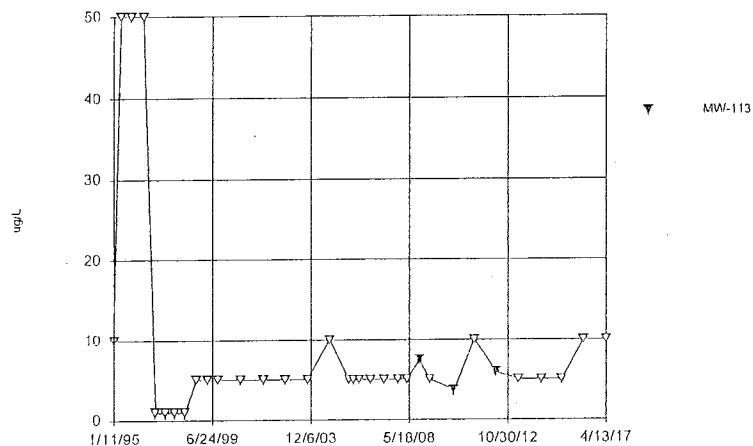
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RealTime™ v.9.5.31 Software licensed to Egon & Associates, Inc. UG
Hollow symbols indicate censored values.

Time Series

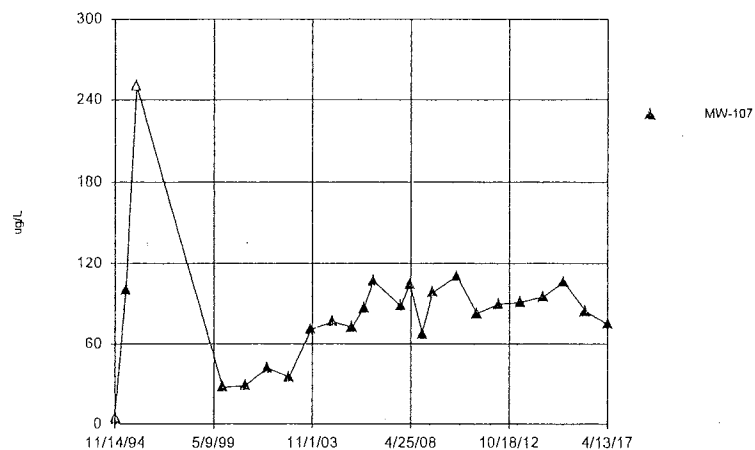


Time Series



Senliss™ v.9.5.31 Software licensed to Enpro & Associates, Inc. UG
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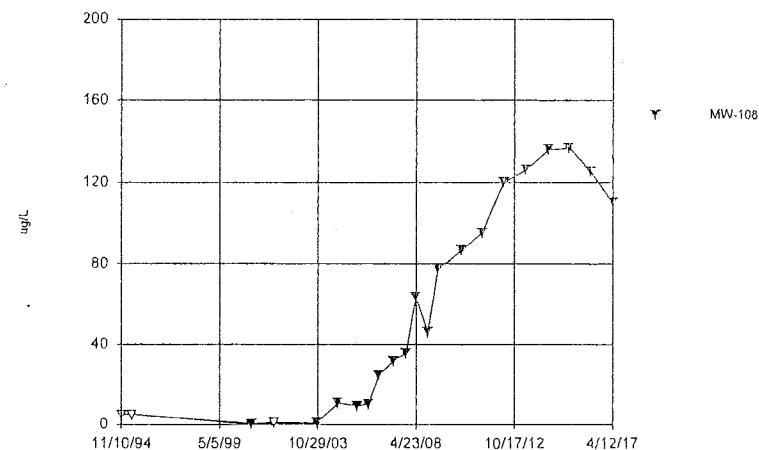
Time Series



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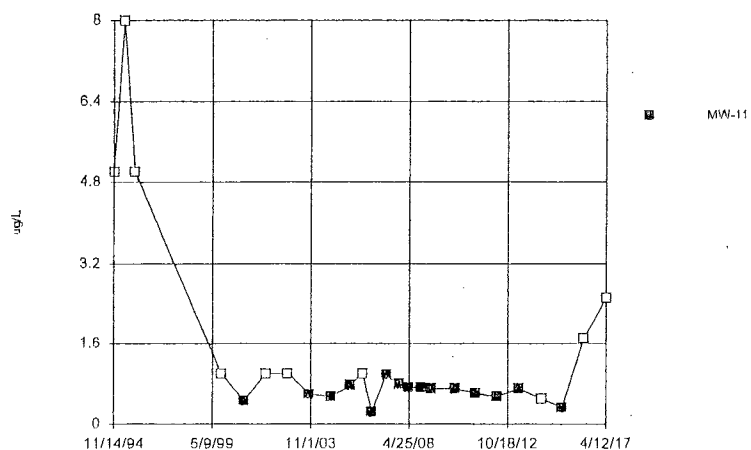
Time Series



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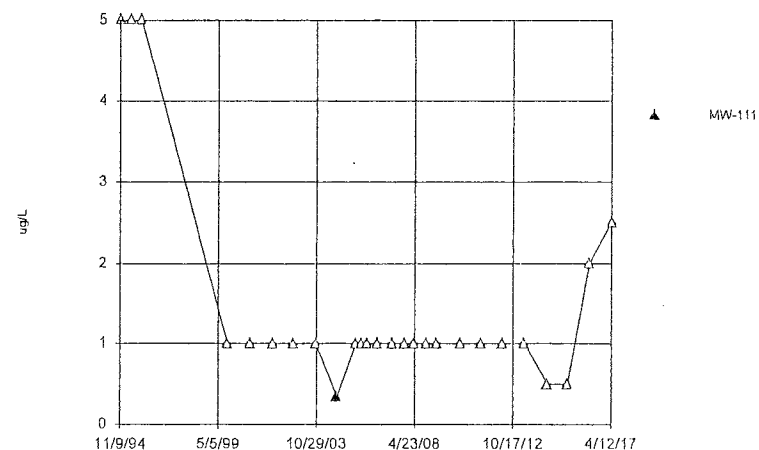
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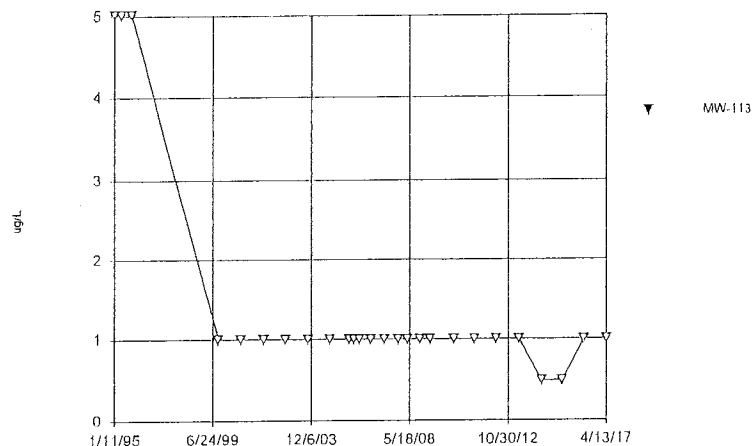
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Time Series



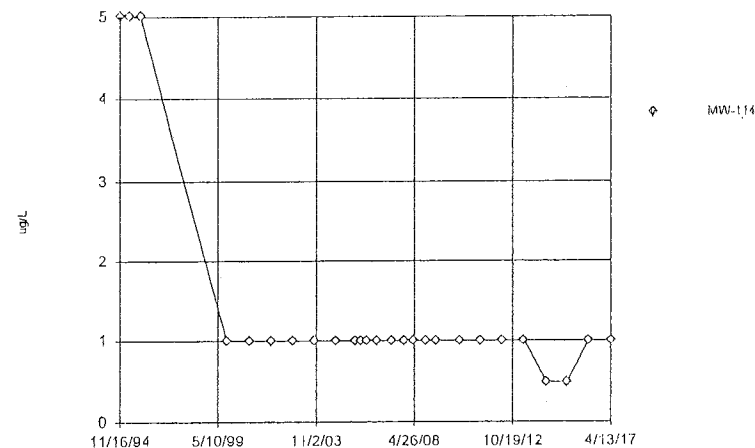
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Time Series



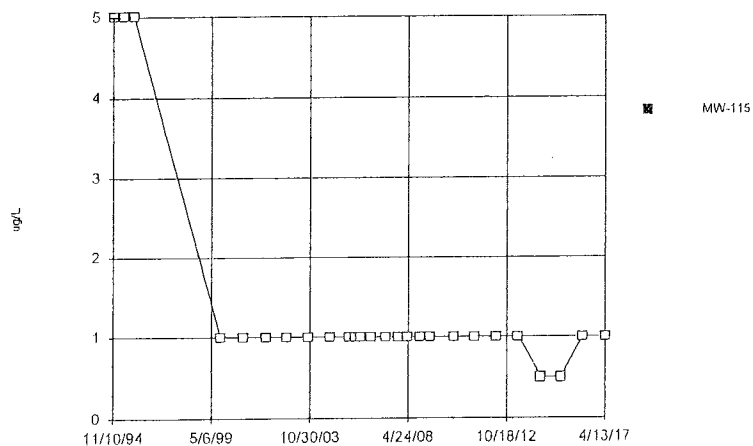
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Time Series



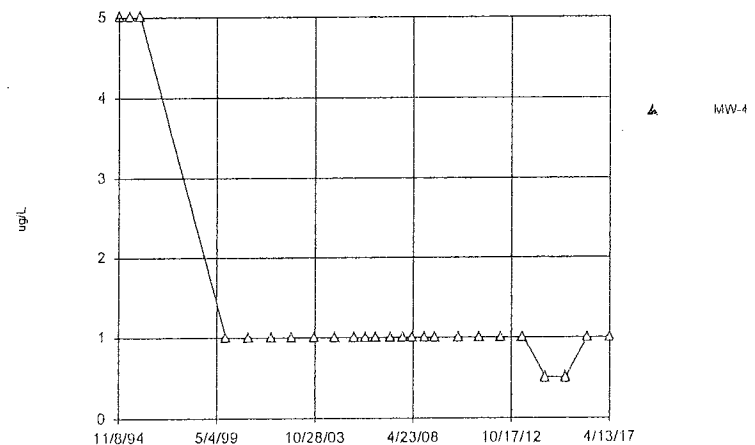
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Time Series



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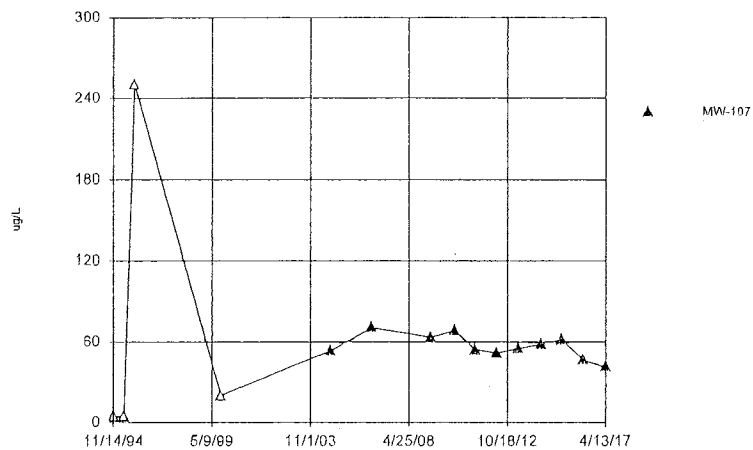
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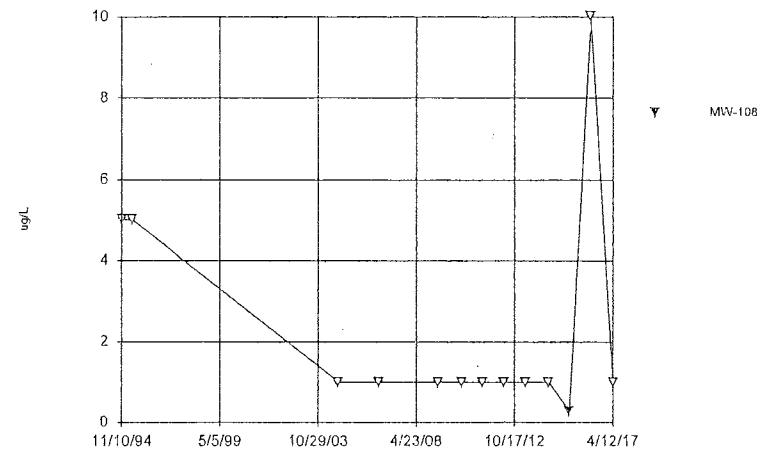
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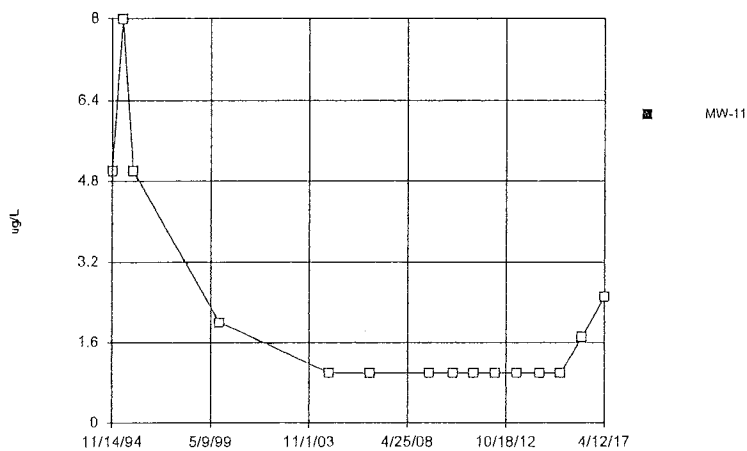
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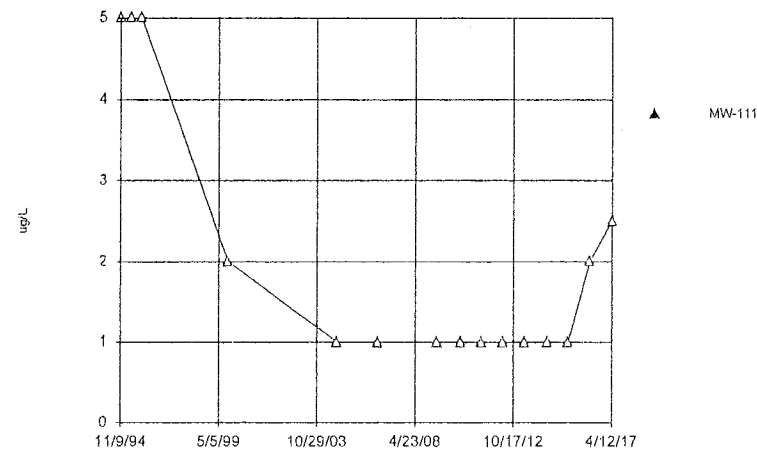
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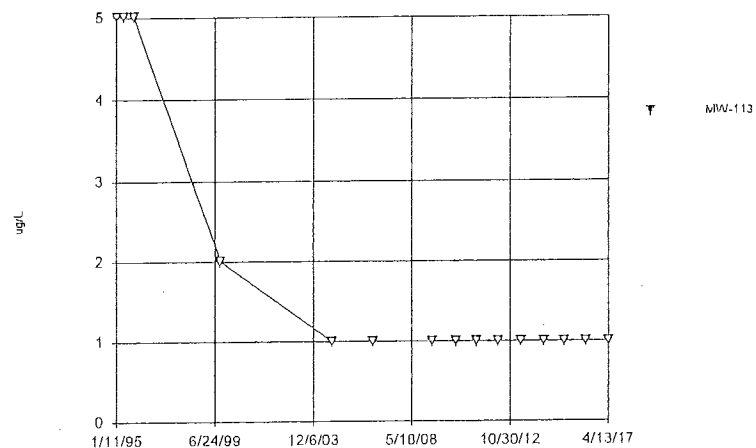
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Time Series



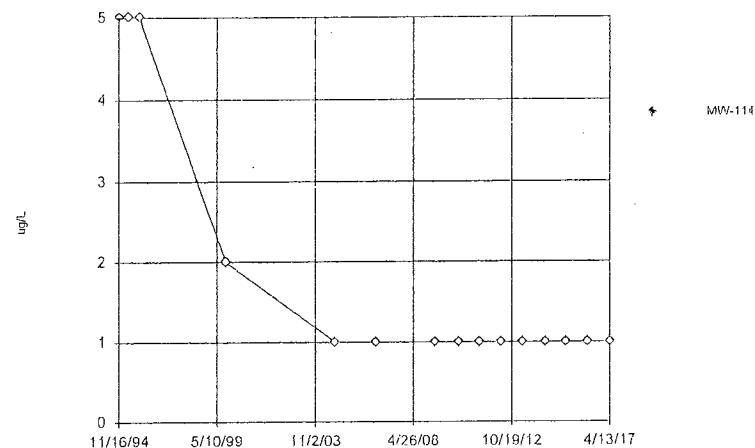
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Time Series



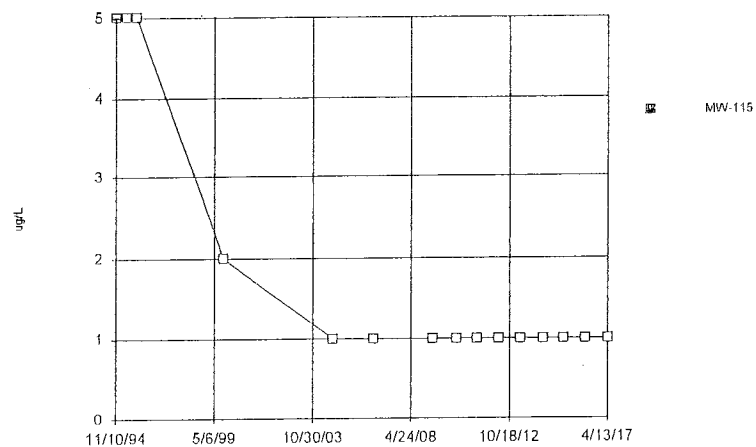
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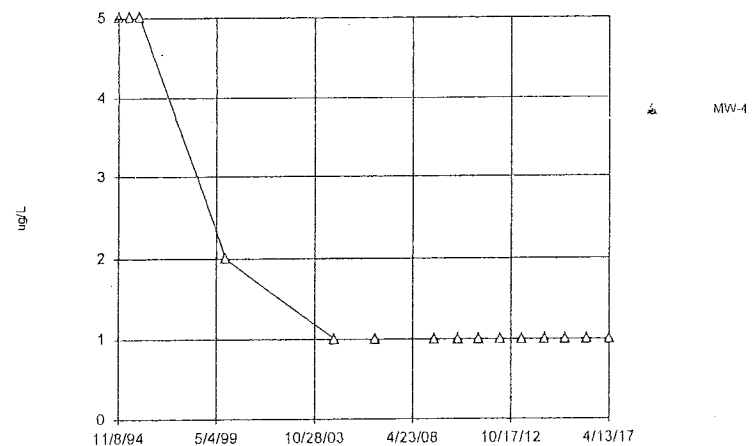
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Time Series



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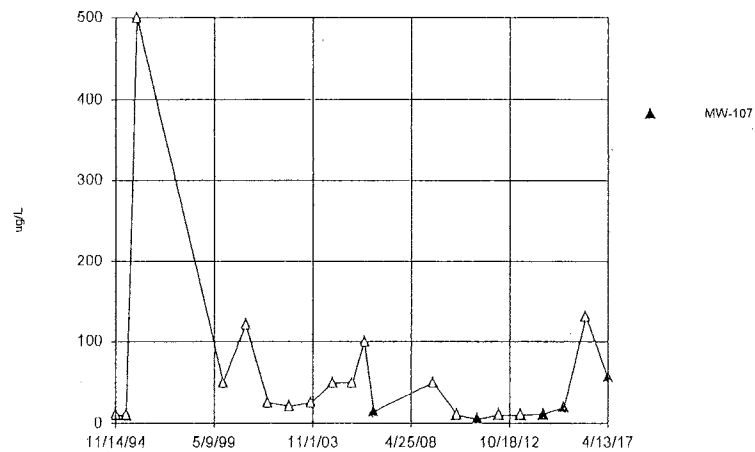
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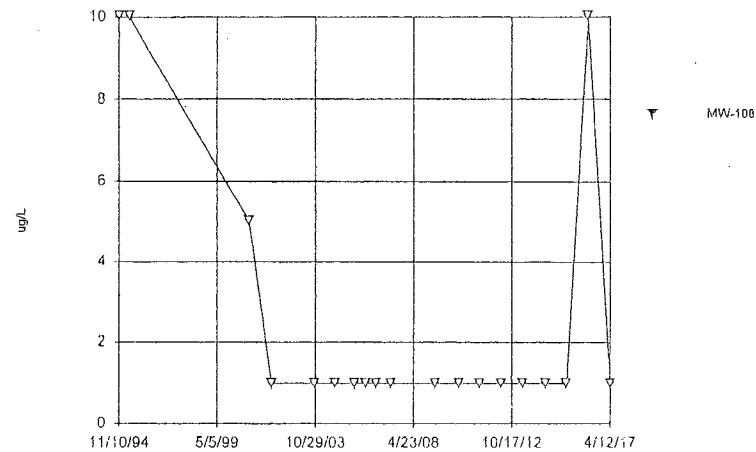
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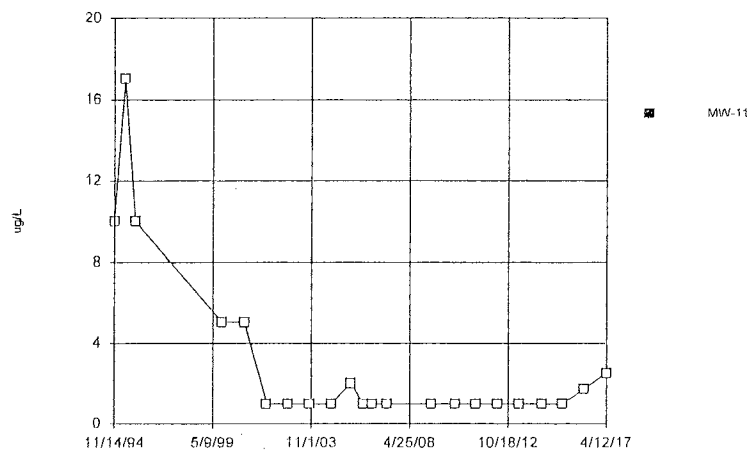
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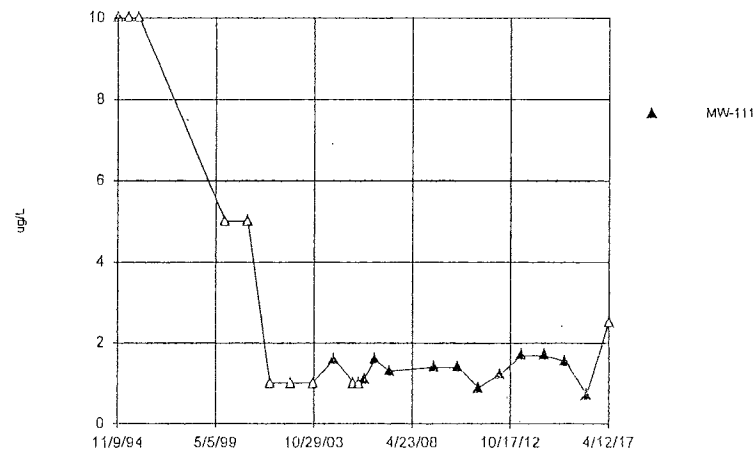
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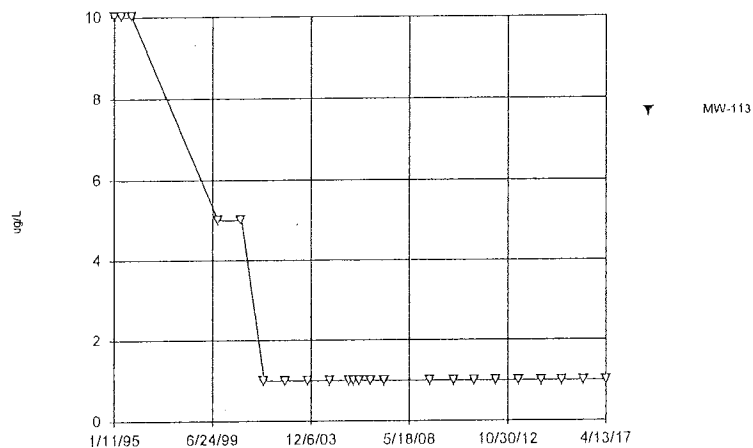
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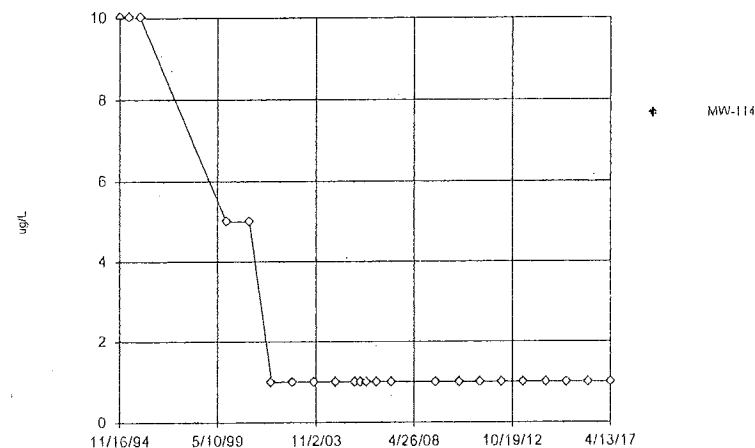
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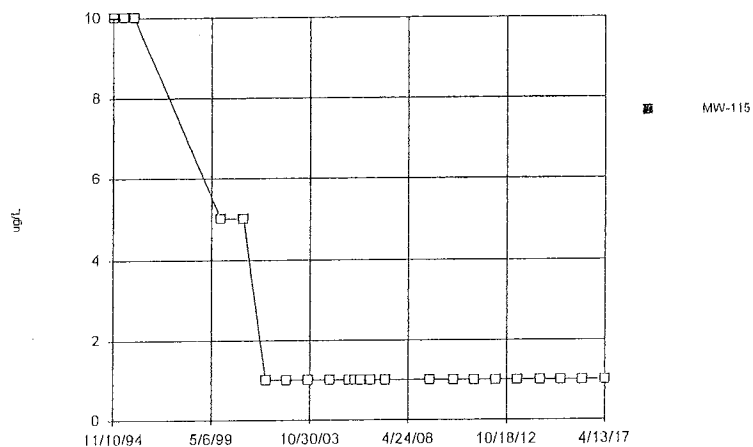
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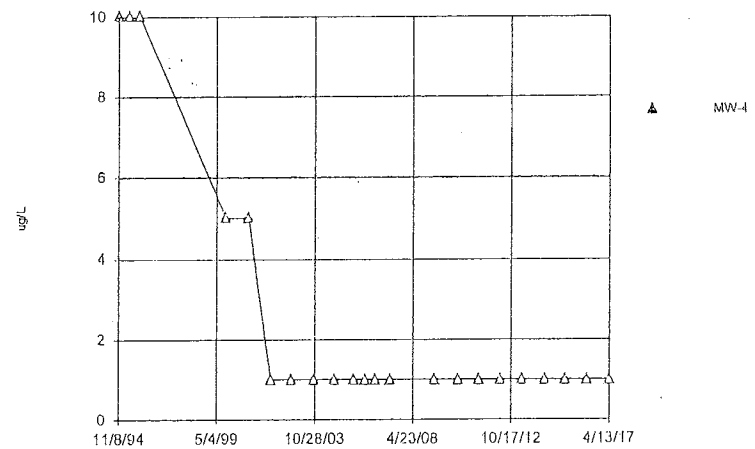
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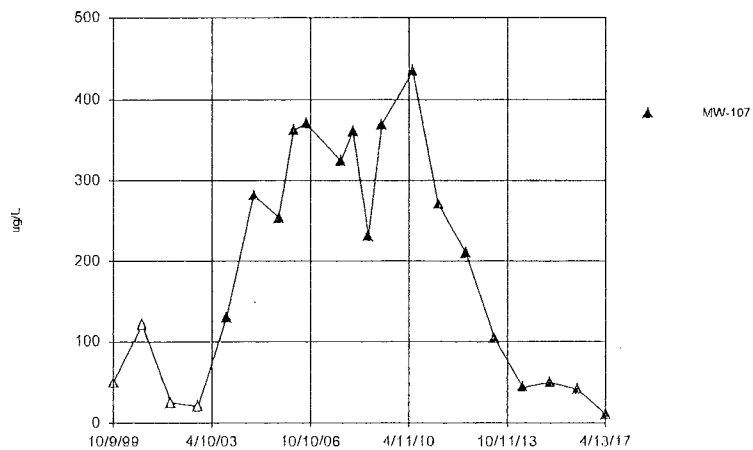
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Time Series



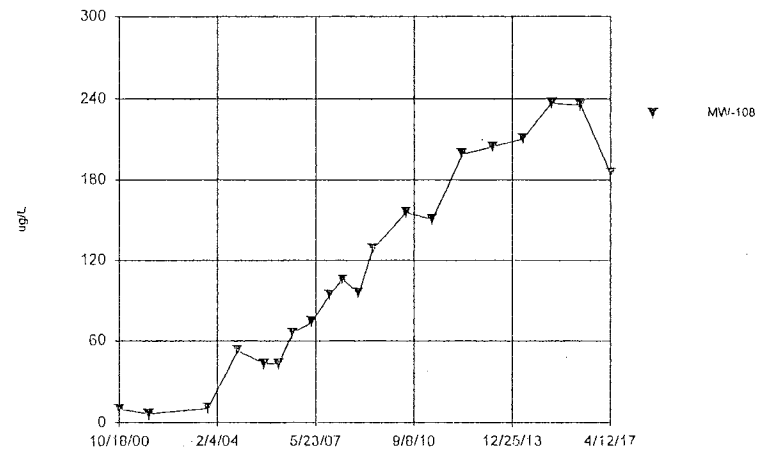
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Time Series



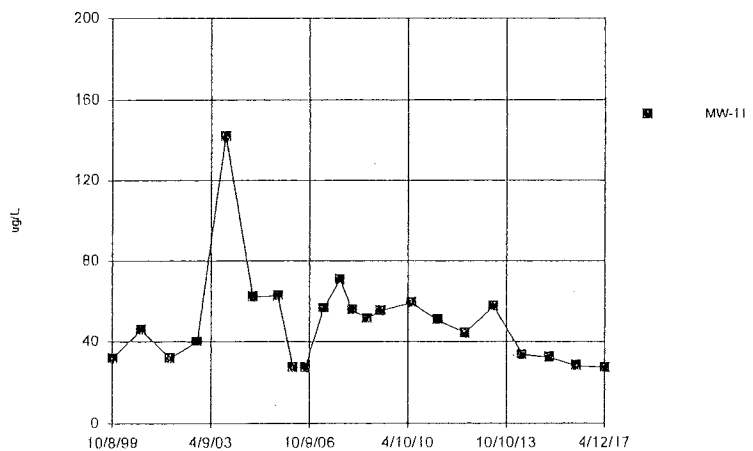
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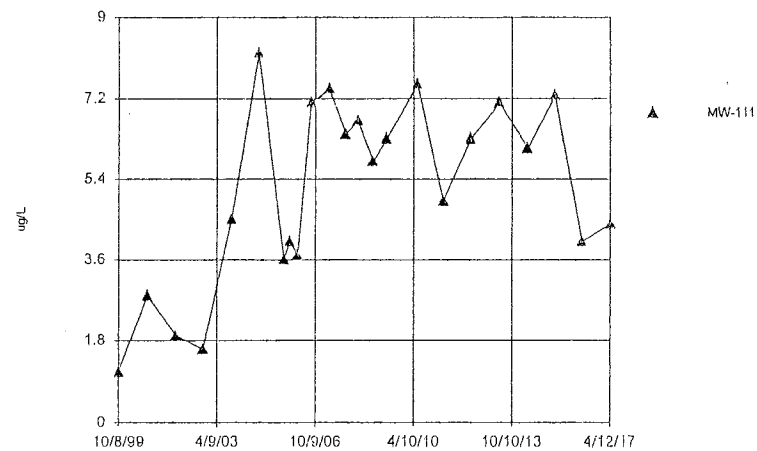
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Time Series



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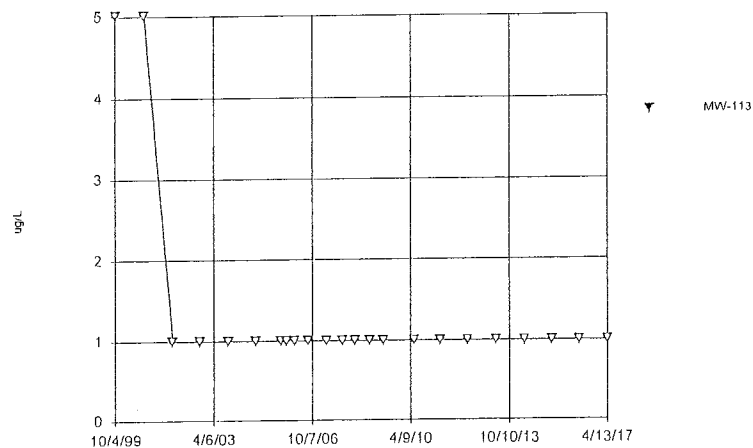
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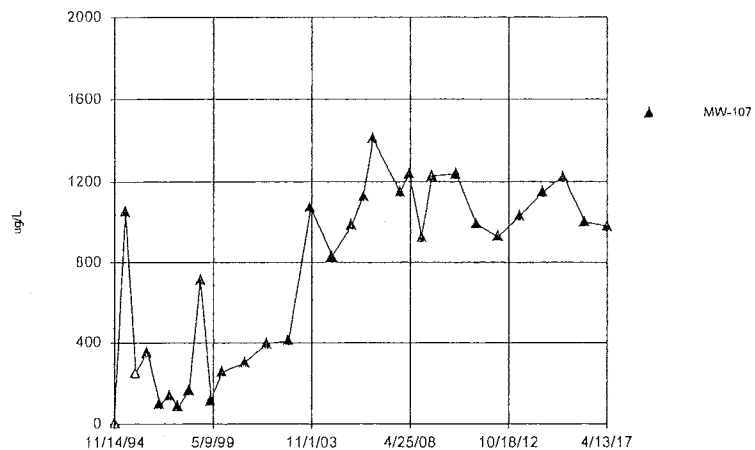
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Hollow symbols indicate censored values.

Time Series



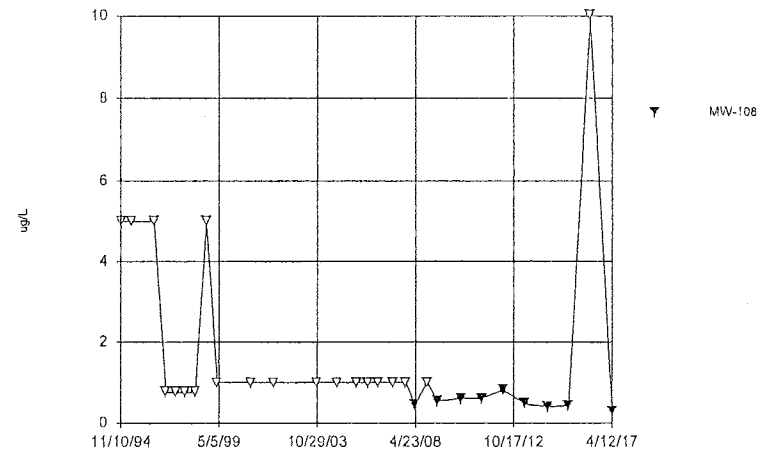
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Time Series



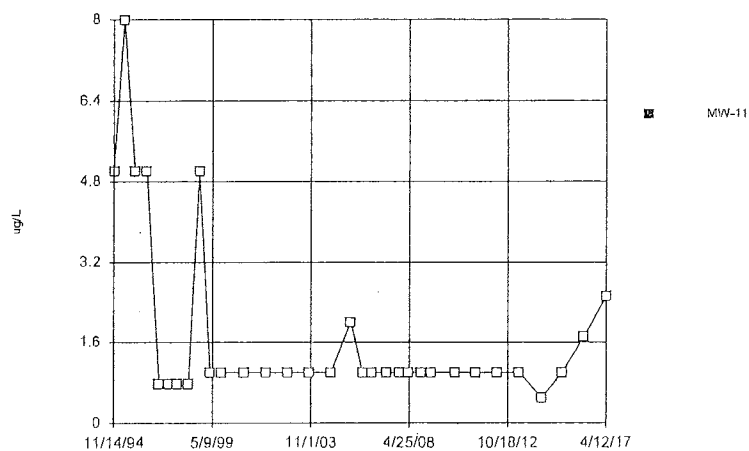
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Time Series



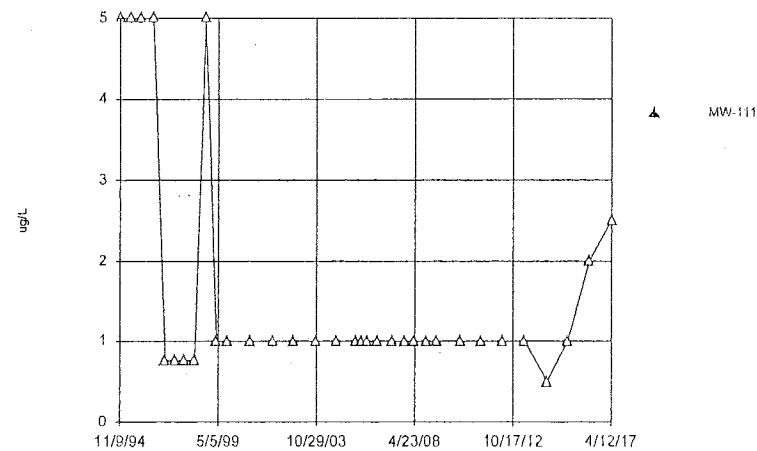
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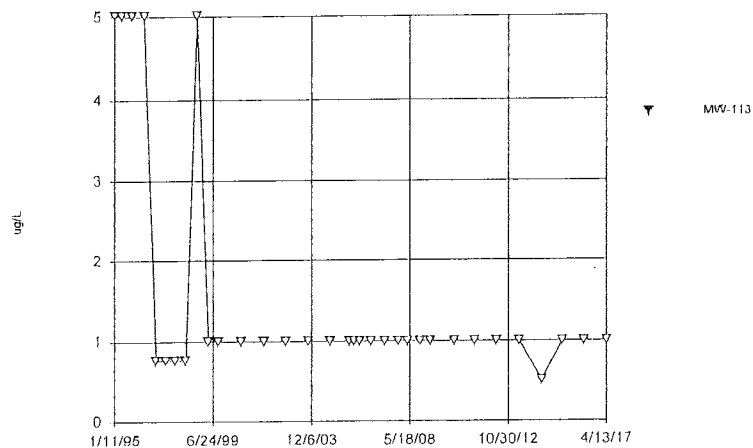
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Time Series



Revlon™ v 9.5.31 Software Licensed to Egon & Associates, Inc. HQ
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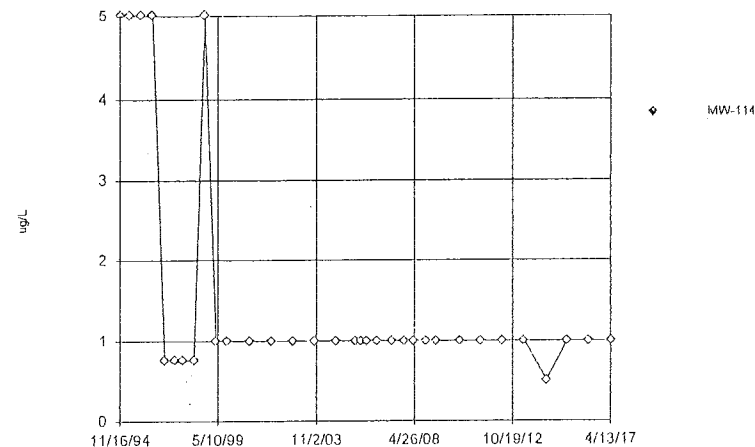
Time Series



Constituent: Ethylbenzene Analysis Run 4/28/2017 1:25 PM View: WTU Time Series
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Revlon™ v 9.5.31 Software Licensed to Egon & Associates, Inc. HQ
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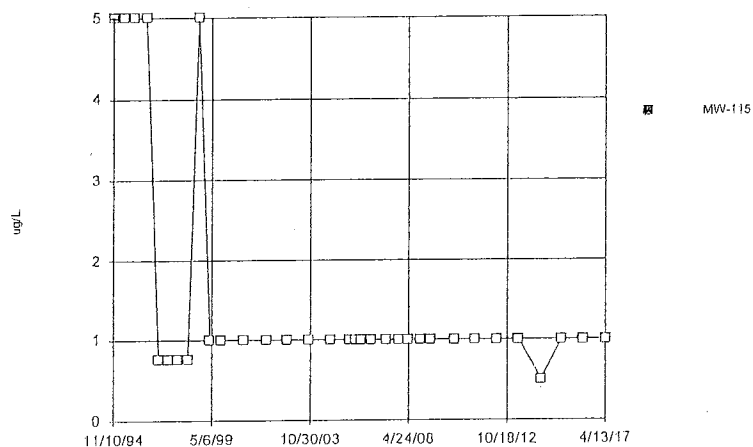
Time Series



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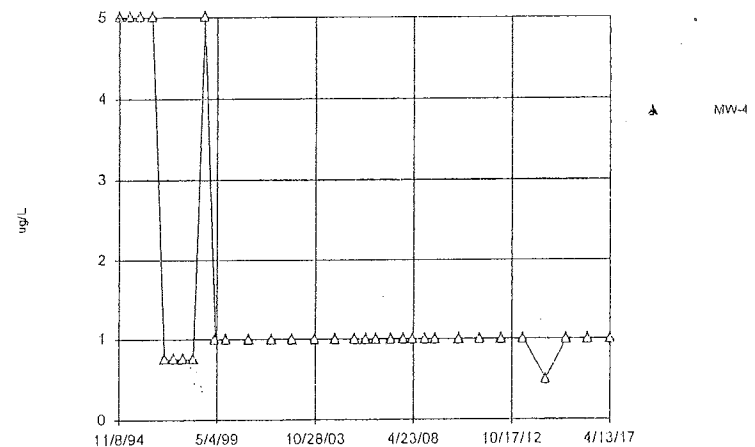
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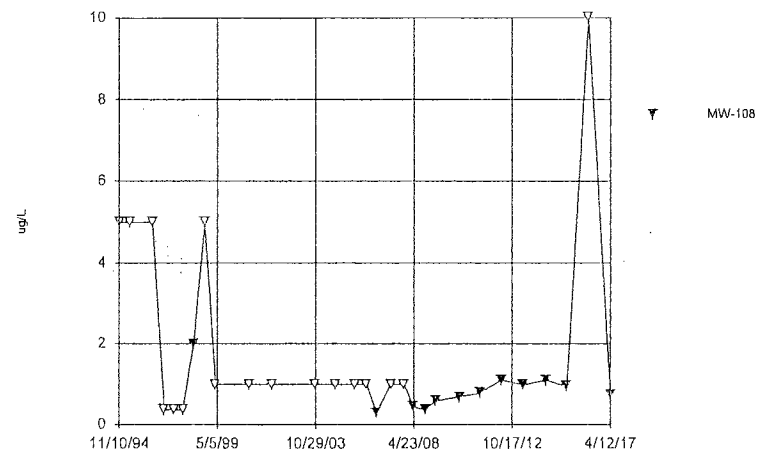
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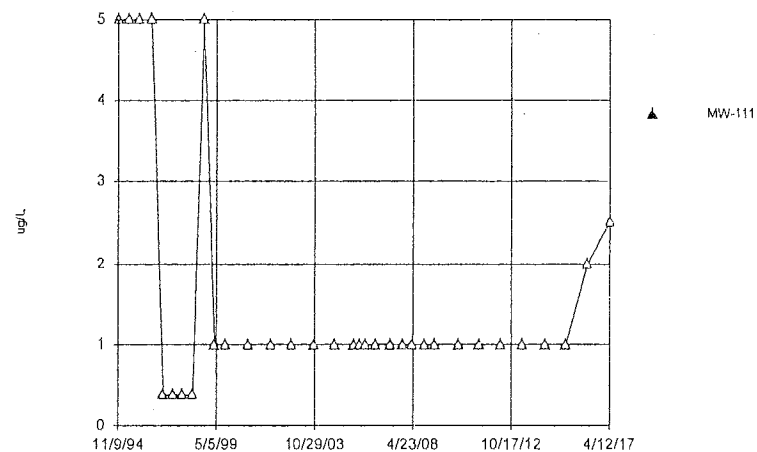
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Time Series



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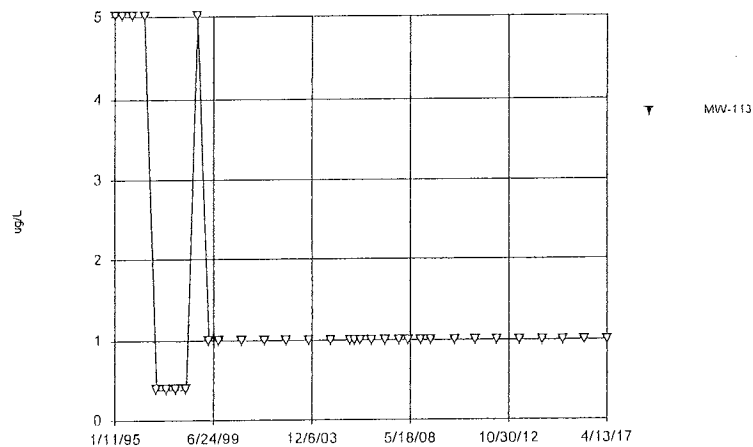
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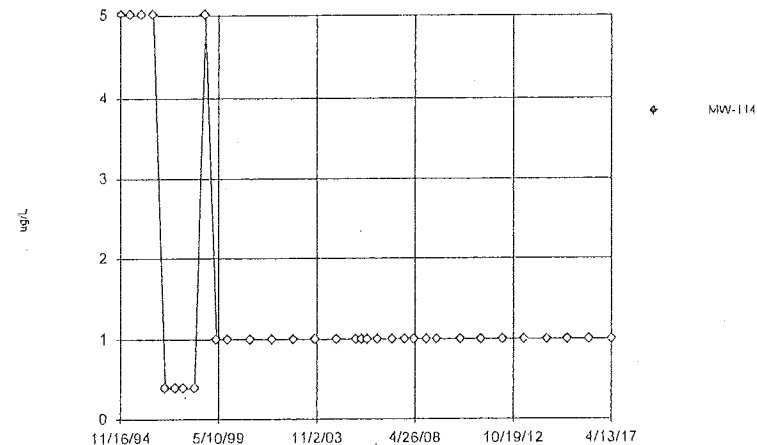
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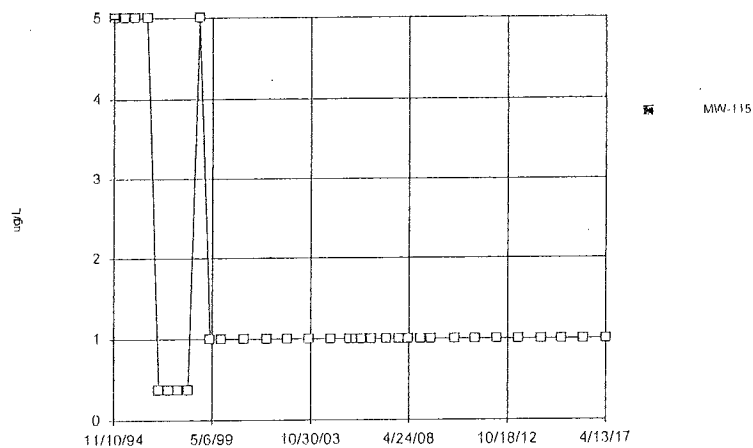
Time Series



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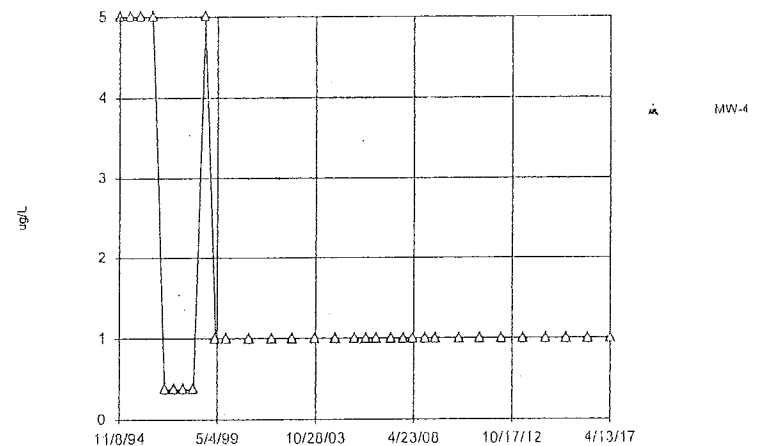
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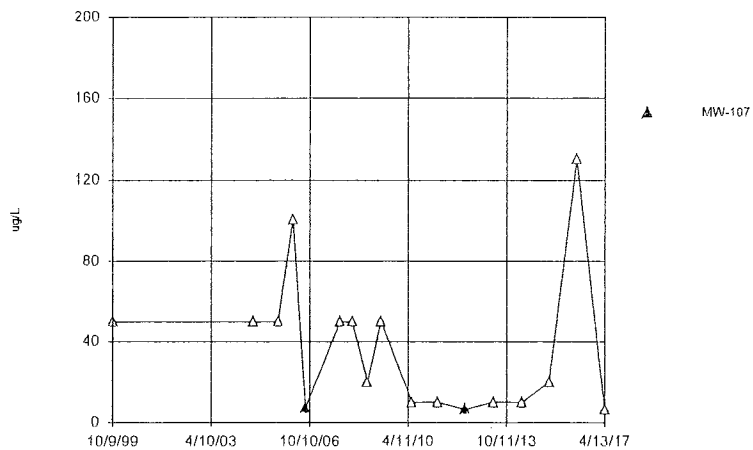
Time Series



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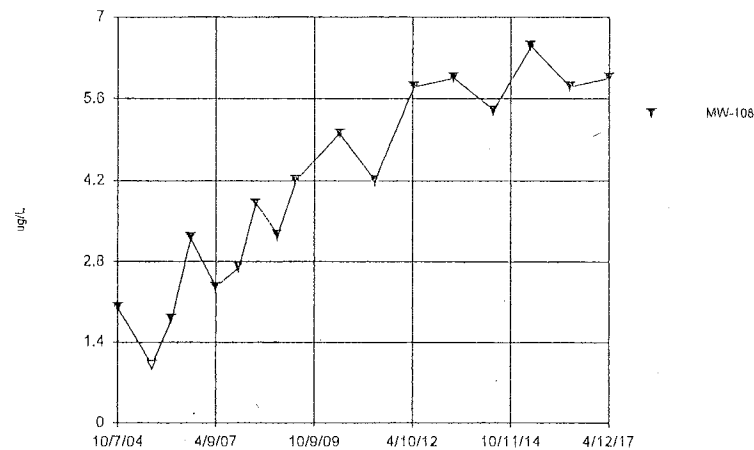
Time Series



Constituent: trans-1,2-Dichloroethene Analysis Run 4/28/2017 1:25 PM View: WTU Time Series
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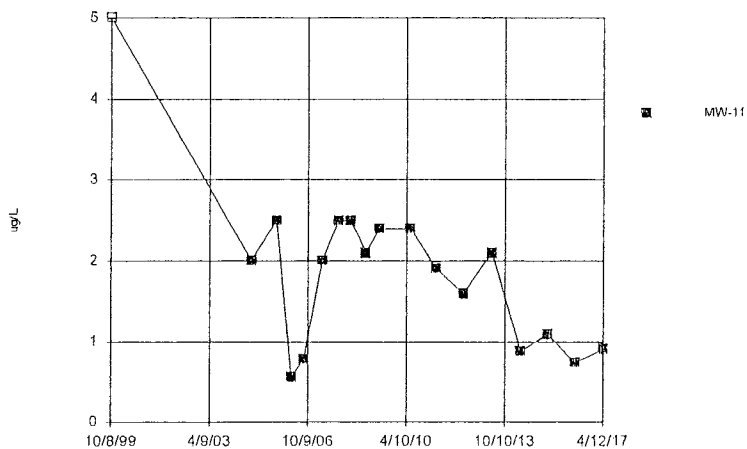
Time Series



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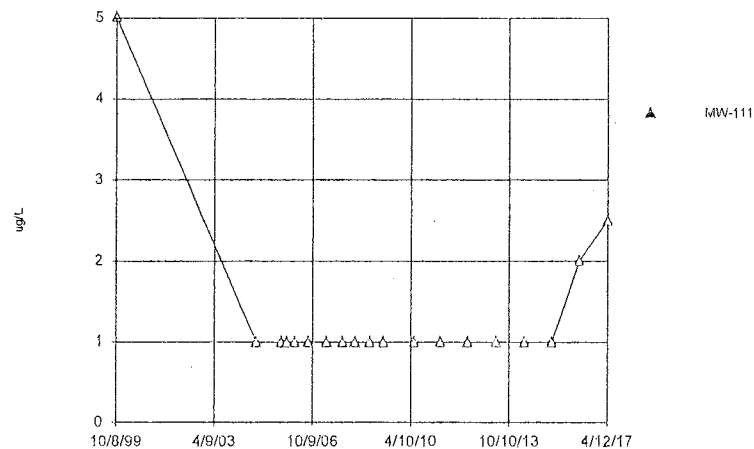
Time Series



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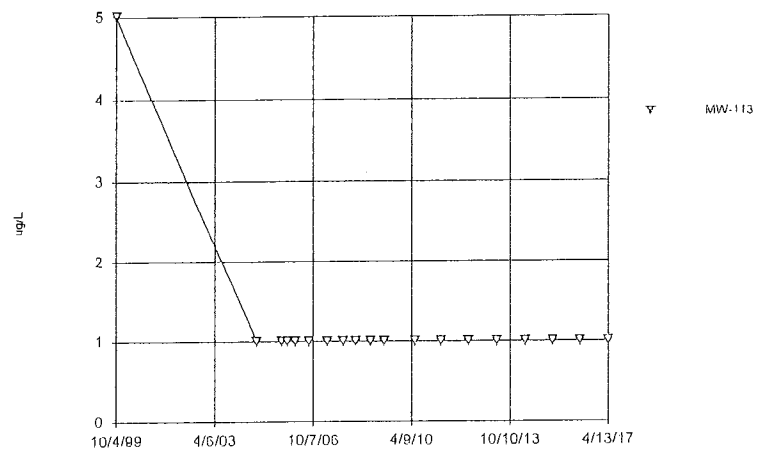
Time Series



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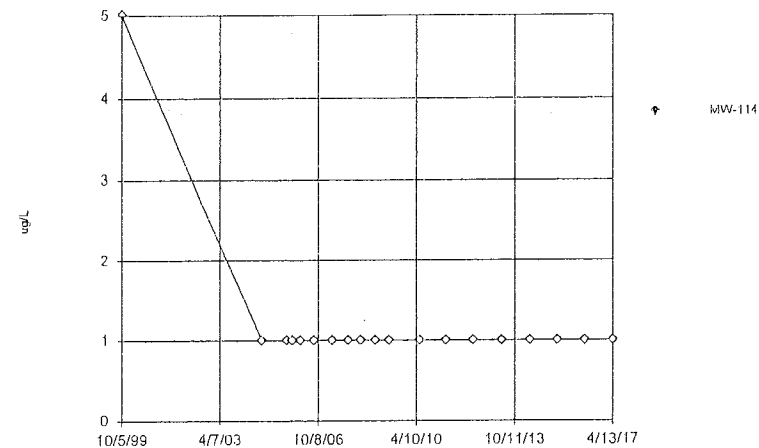
Time Series



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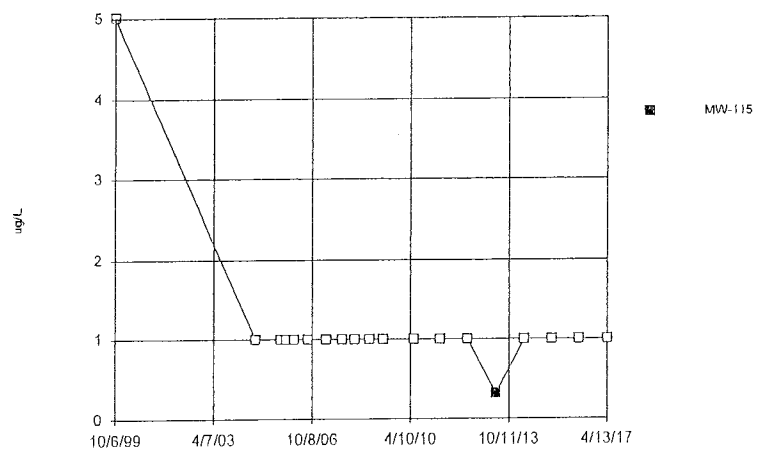
Time Series



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SeniLine™ v.9.5.31 Software licensed to Expon & Associates, Inc. UG
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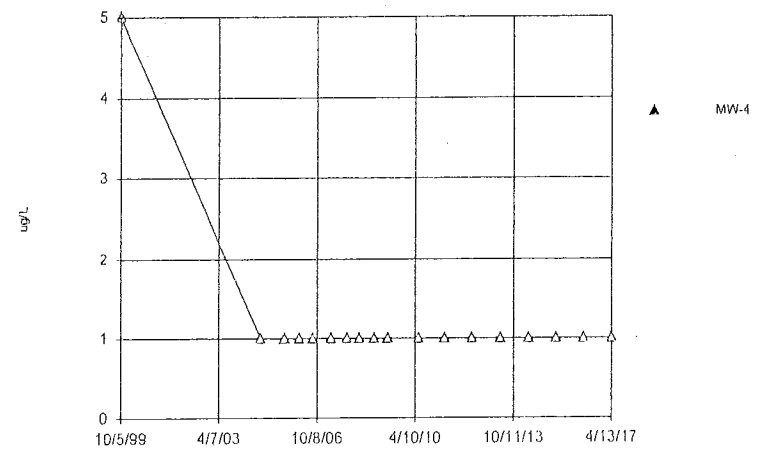
Time Series



Constituent: trans-1,2-Dichloroethene Analysis Run 4/28/2017 1:25 PM View: WTU Time Series
Summit National Site Client: Summit National Site Data: Summit.National.Database

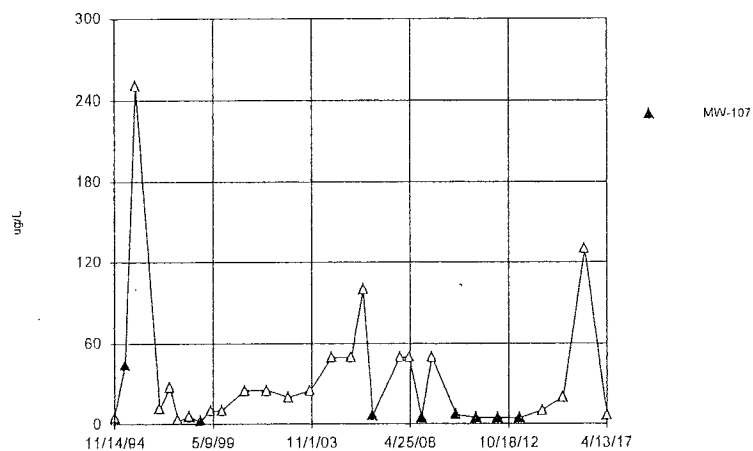
SeniLine™ v.9.5.31 Software licensed to Expon & Associates, Inc. UG
Hollow symbols indicate censored values.

Time Series



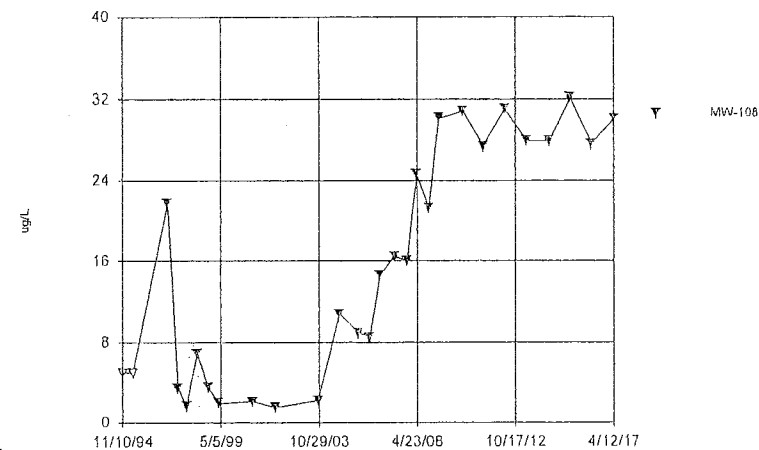
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Time Series



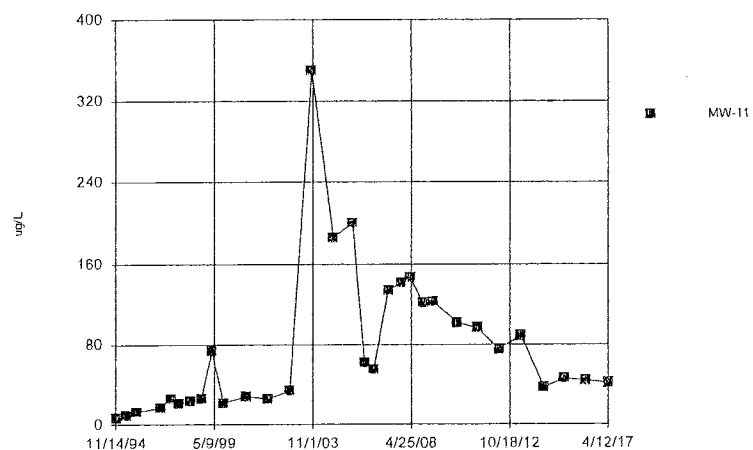
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Time Series



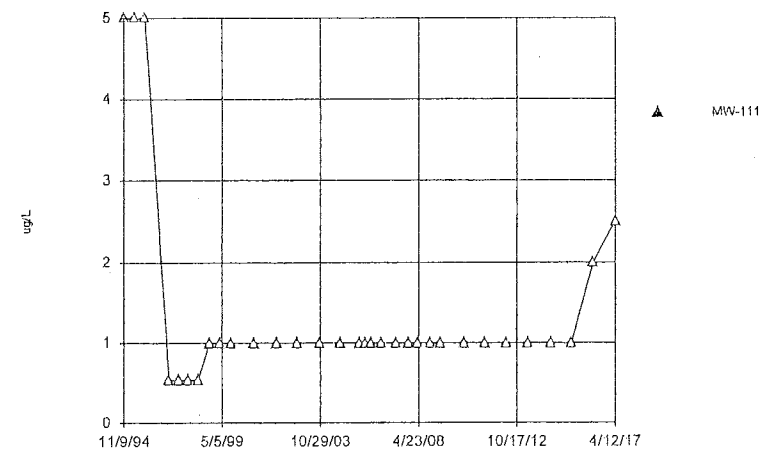
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Time Series



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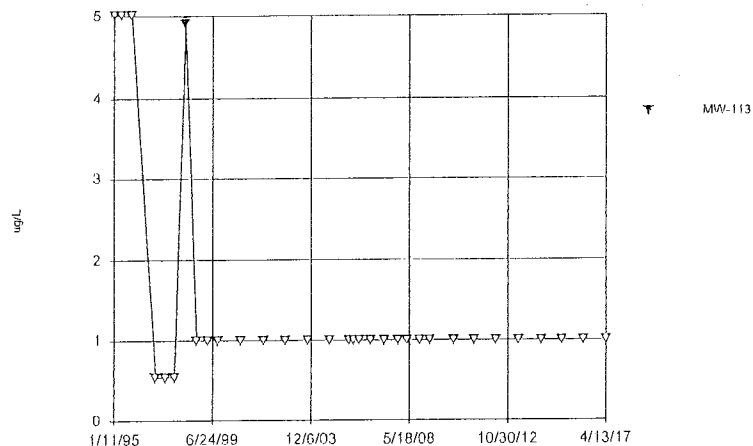
Time Series



Constituent: Trichloroethene Analysis Run 4/28/2017 1:25 PM View: WTU Time Series
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Benliss™ v.0.5.31 Software licensed to Egon & Associates, Inc. UG
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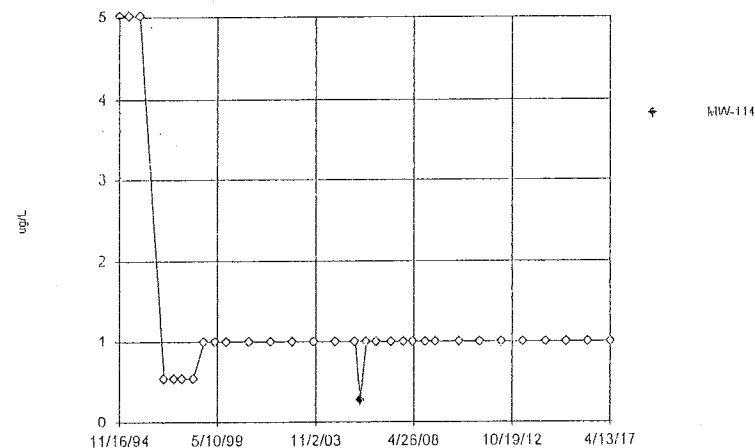
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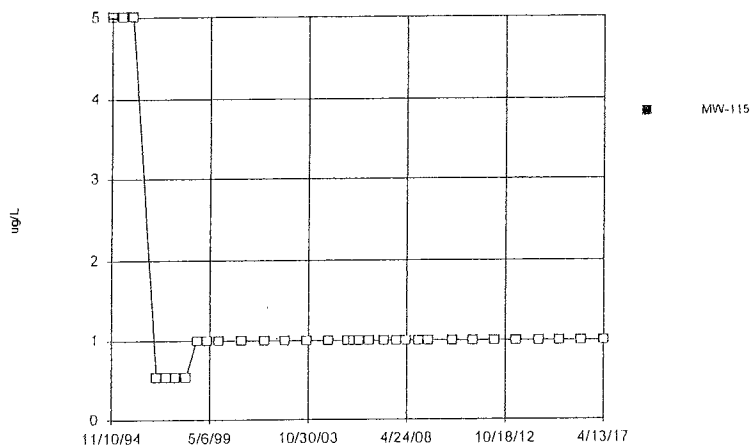
Time Series



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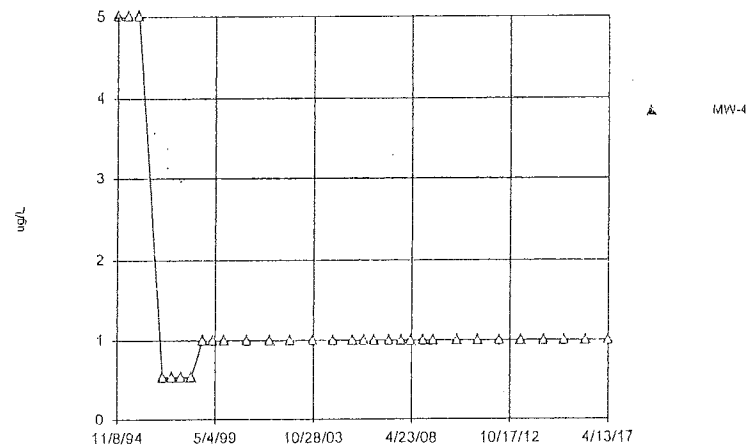
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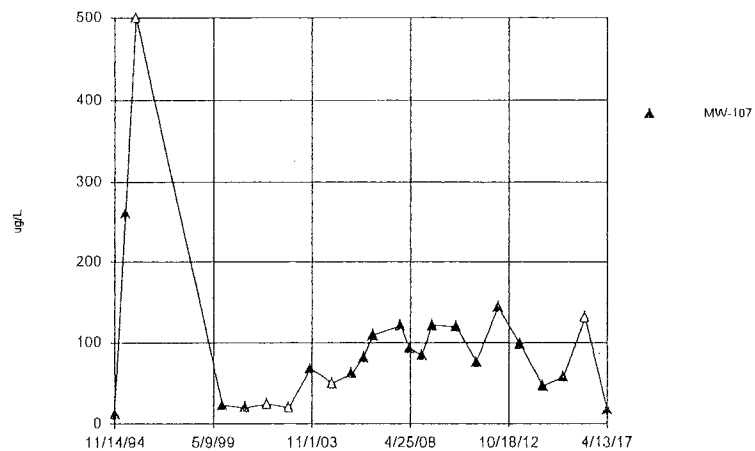
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Constituent: Trichloroethene Analysis Run 4/28/2017 1:25 PM View: WTU Time Series
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Revised v.0.5.31 Software licensed to Engen & Associates, Inc. UD
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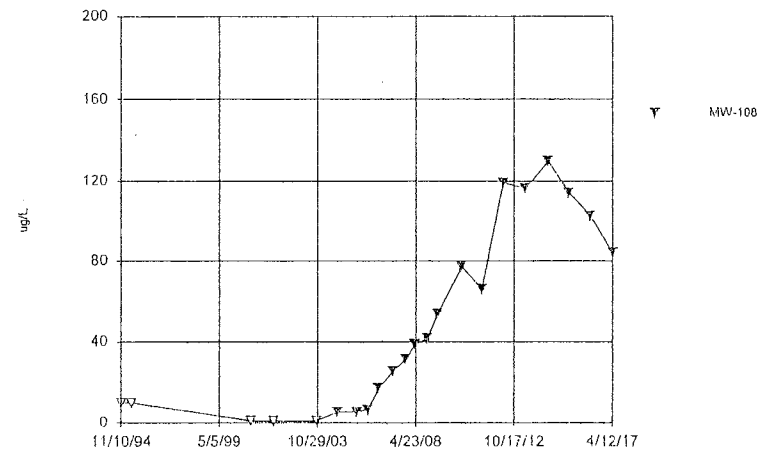
Time Series



Constituent: Vinyl chloride Analysis Run 4/28/2017 1:25 PM View: WTU Time Series
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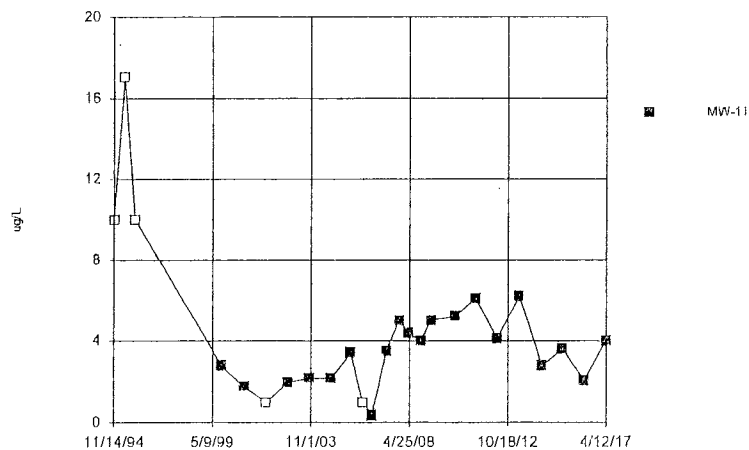
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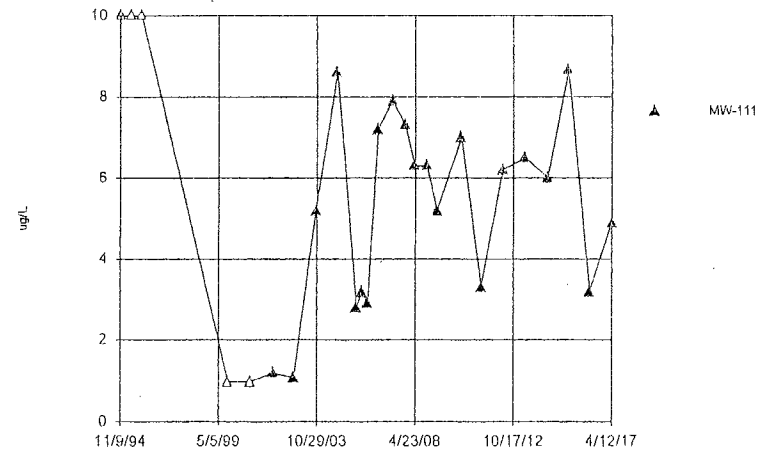
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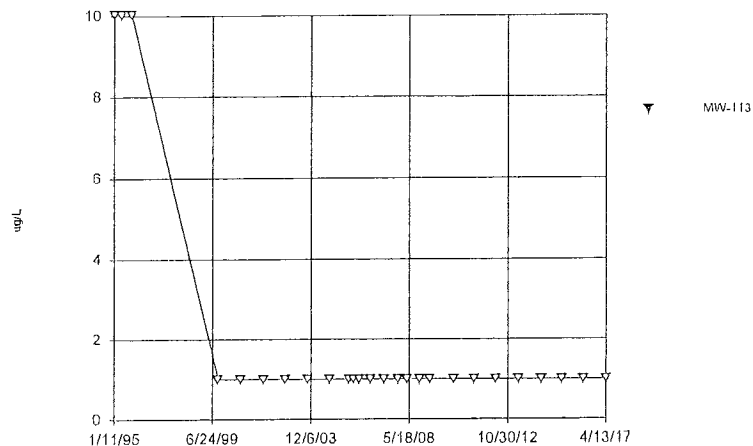
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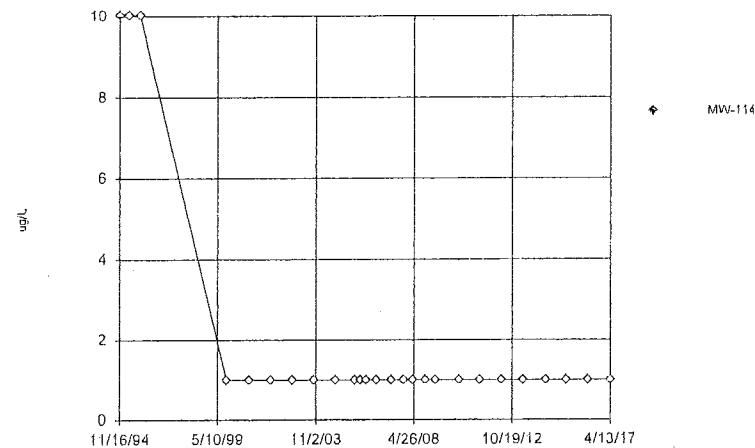
Time Series



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Benliss™ v.9.5.31 Software Licensed to Engen & Associates, Inc. UG
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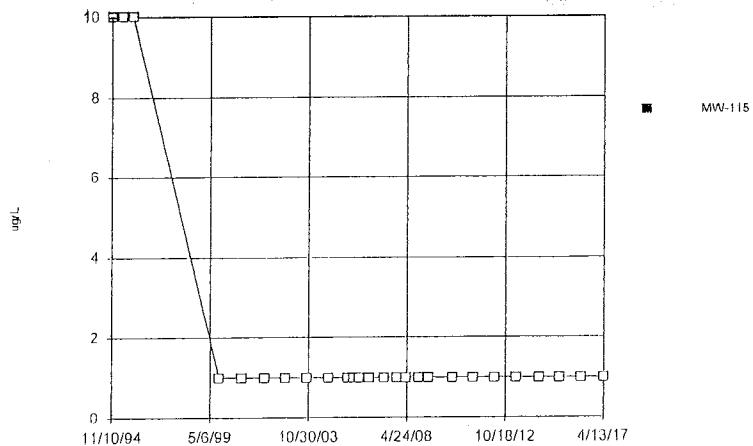
Time Series



Constituent: Vinyl chloride Analysis Run 4/28/2017 1:25 PM View: WTU Time Series
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Benliss™ v.9.5.31 Software Licensed to Engen & Associates, Inc. UG
Hollow symbols indicate censored values.

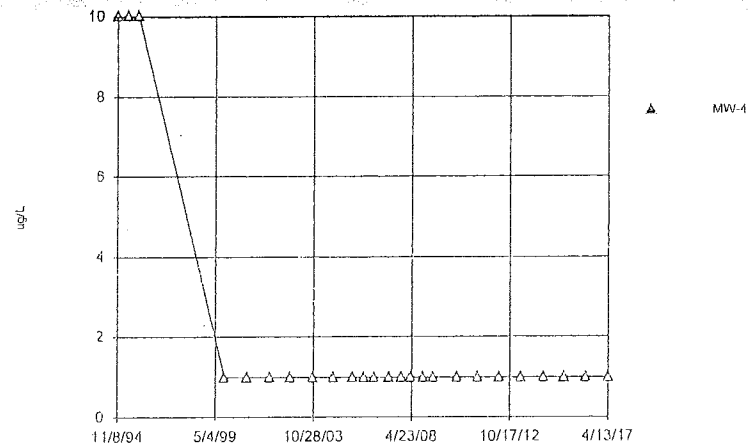
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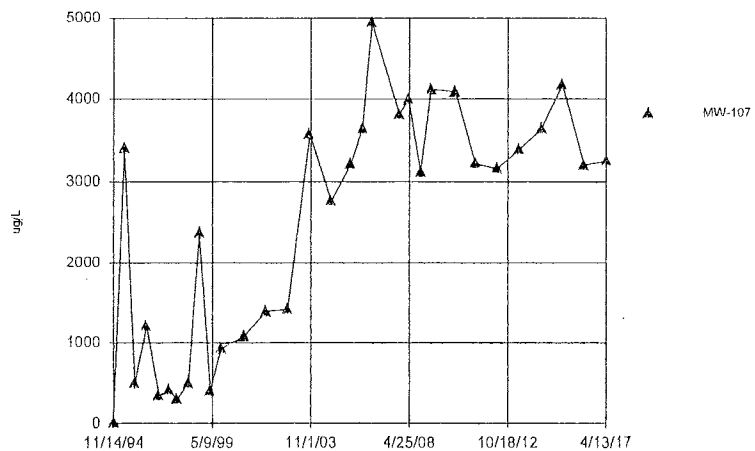
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Time Series

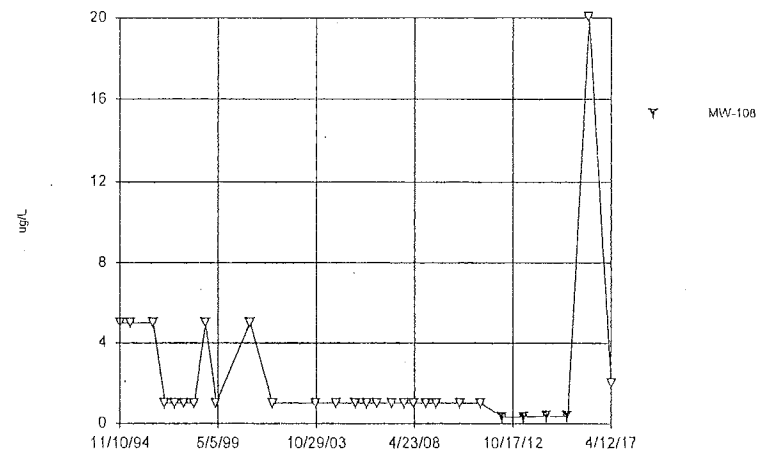


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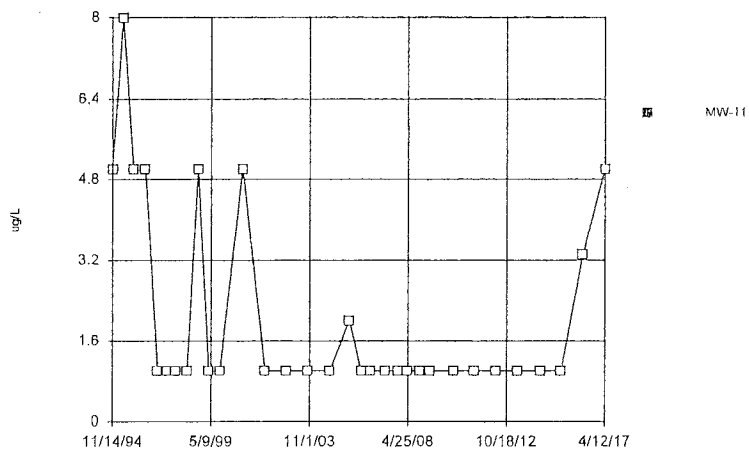
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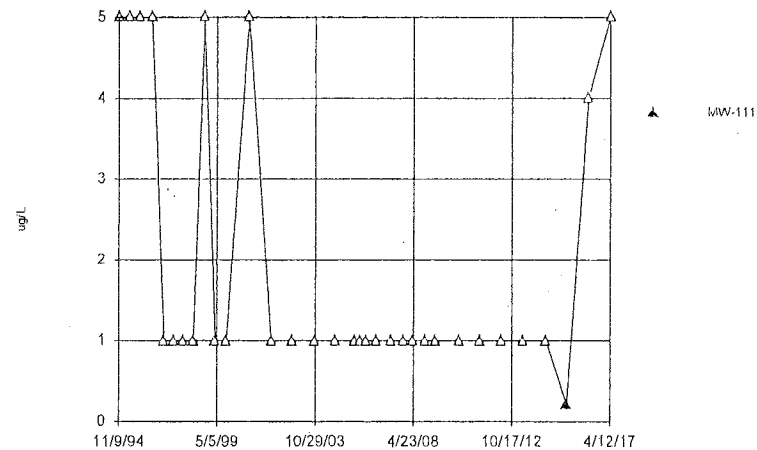
Time Series



Time Series

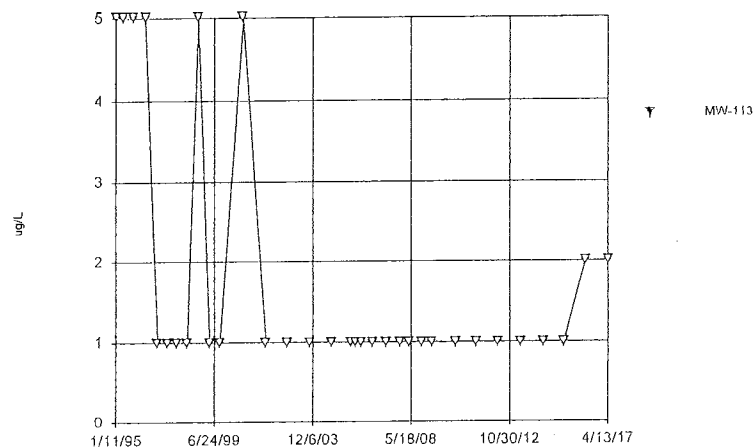


Time Series



SmallCap™ v.0.5.31 Software licensed to Engeln & Associates, Inc. UG
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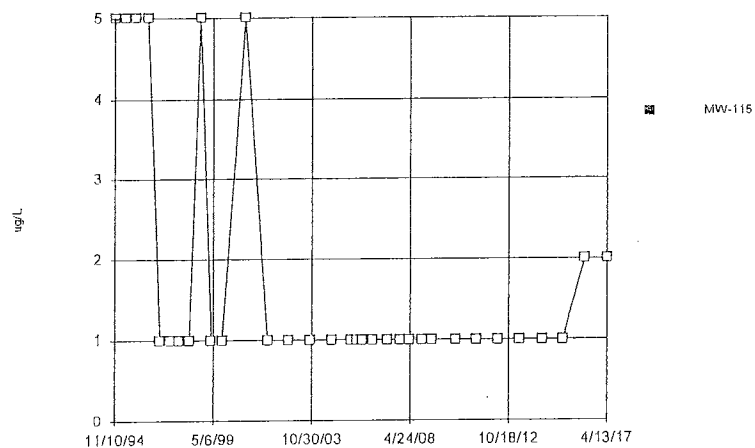
Time Series



Constituent: Xylenes [total] Analysis Run 4/28/2017 1:25 PM View: WTU Time Series
Summit National Site Client: Summit National Site Data: Summit.National.Database

Smalline[®] v.0.5.01 Software licensed to Eagon & Associates, Inc. (E) Hollow symbols indicate censored values.

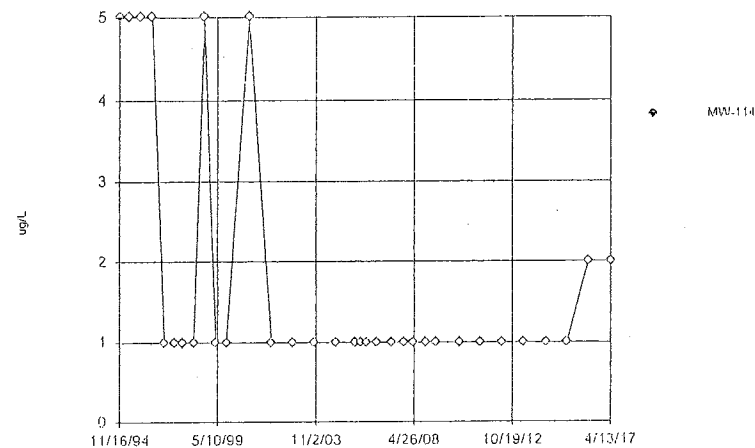
Time Series



Constituent: Xylenes [total] Analysis Run 4/28/2017 1:25 PM View: WTU Time Series
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Senics™ v.9.5.31 Software licensed to Egon & Associates, Inc. UG
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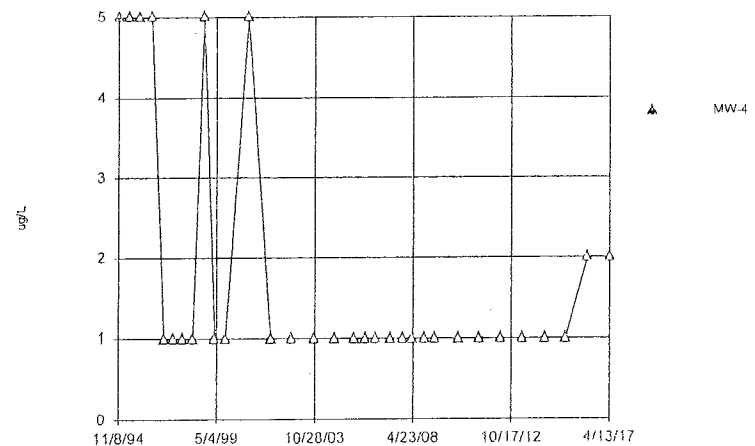
Time Series



Constituent: Xylenes [total] Analysis Run 4/28/2017 1:25 PM View: WTU Time Series
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Sandbag™ v.9.5.31 Software licensed to Egeon & Associates, Inc. UG
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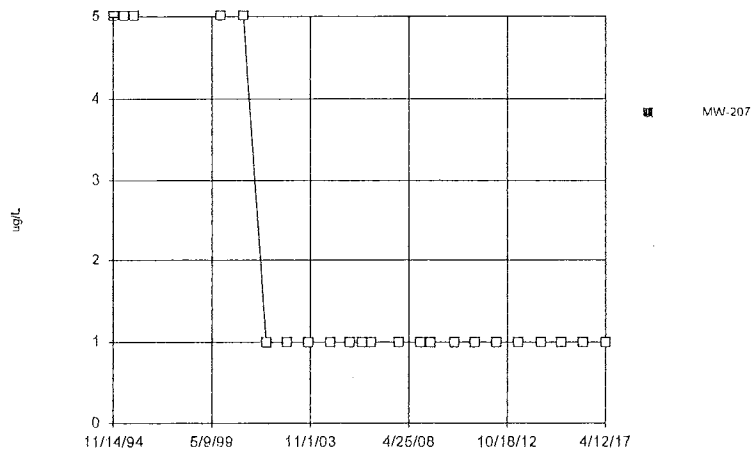
Time Series



Constituent: Xylenes [total] Analysis Run 4/28/2017 1:25 PM View: WTU Time Series
Summit National Site Client: Summit National Site Data: Summit.National.Database

SeniLine™ v.9.5.31 Software Licensed to Enpro & Associates, Inc. UG
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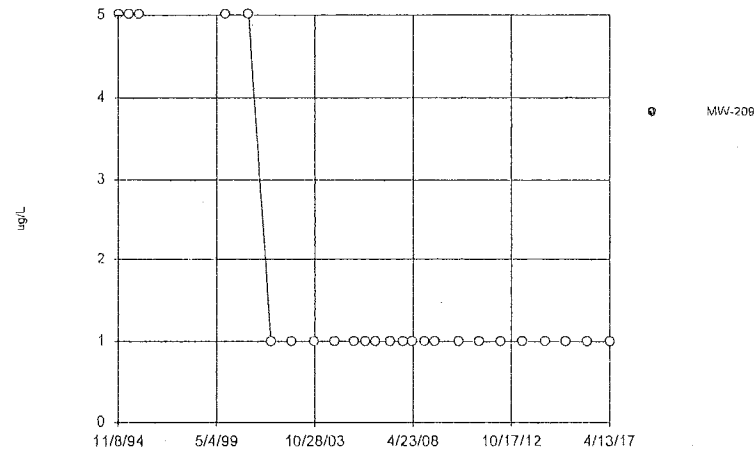
Time Series



Constituent: 1,1,1-Trichloroethane Analysis Run 4/28/2017 1:18 PM View: UIU Time Series
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SeniLine™ v.9.5.31 Software Licensed to Enpro & Associates, Inc. UG
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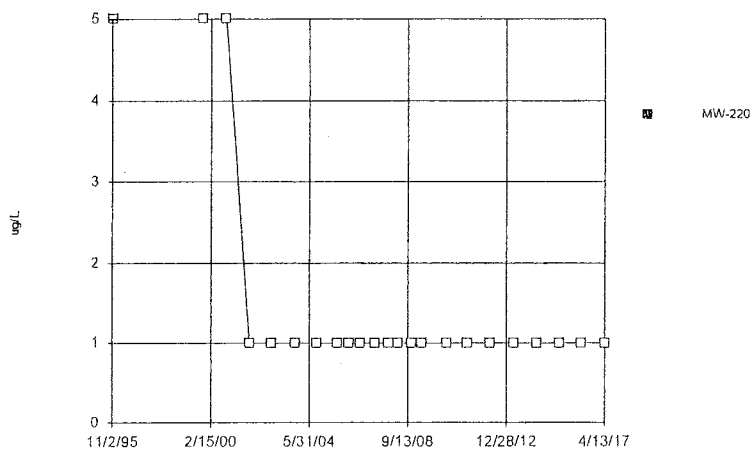
Time Series



Constituent: 1,1,1-Trichloroethane Analysis Run 4/28/2017 1:18 PM View: UIU Time Series
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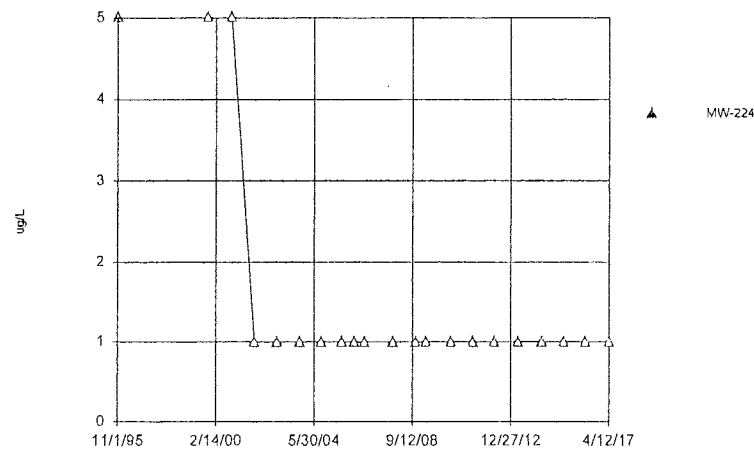
Time Series



Constituent: 1,1,1-Trichloroethane Analysis Run 4/28/2017 1:18 PM View: UIU Time Series
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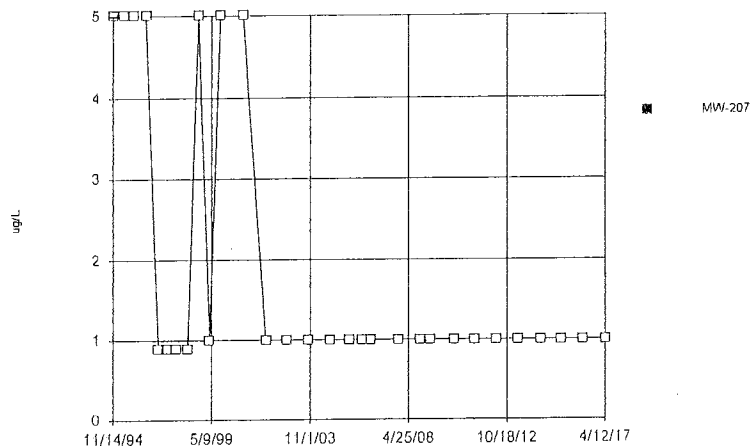
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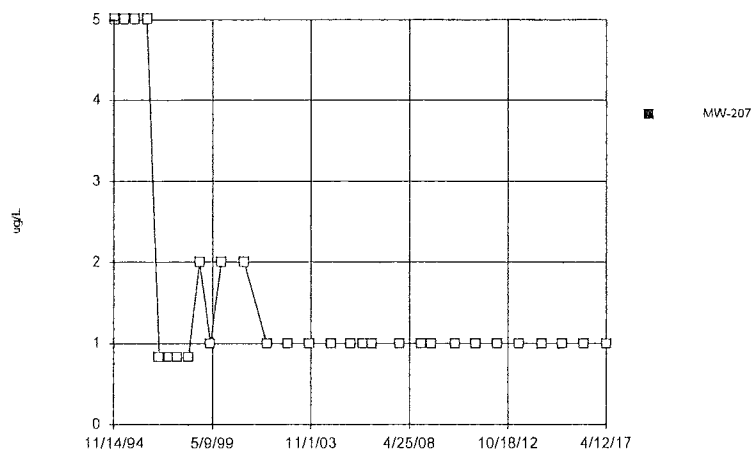
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Summit National Site Client: Summit National Site Data: Summit.National.Database

RealTime™ v.9.5.31 Software Licensed to Engen & Associates, Inc. UG
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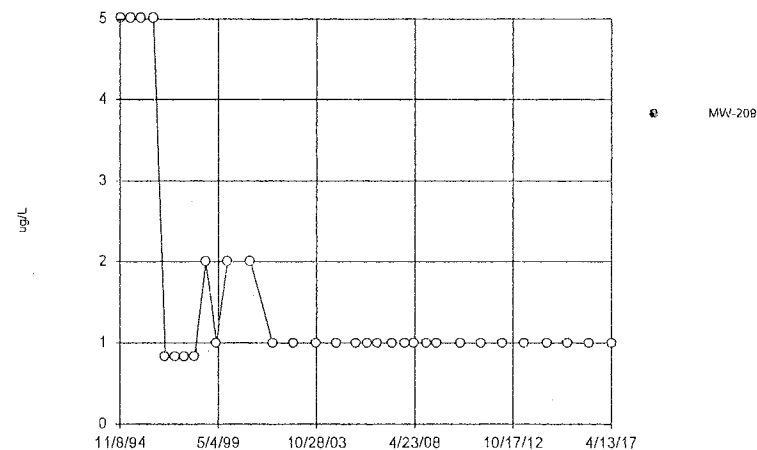
Time Series



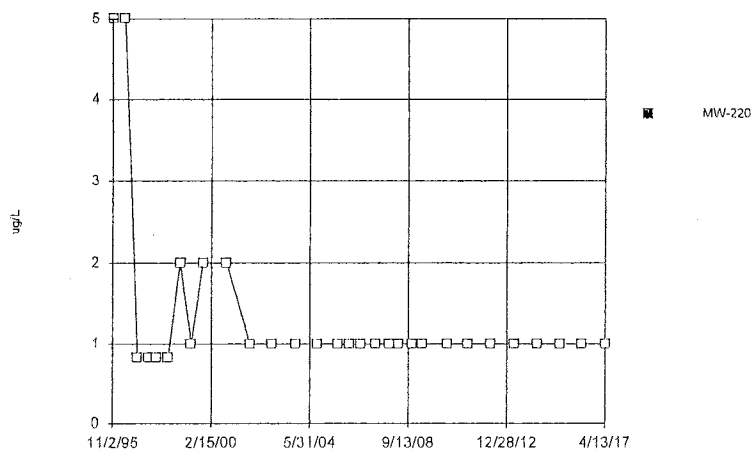
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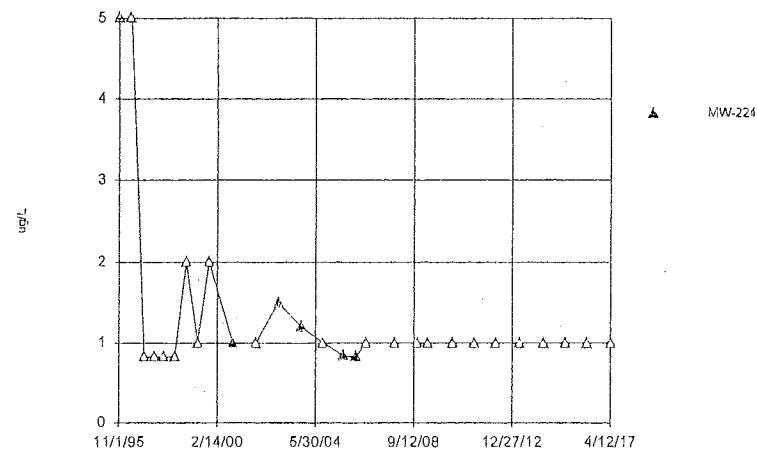
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Time Series

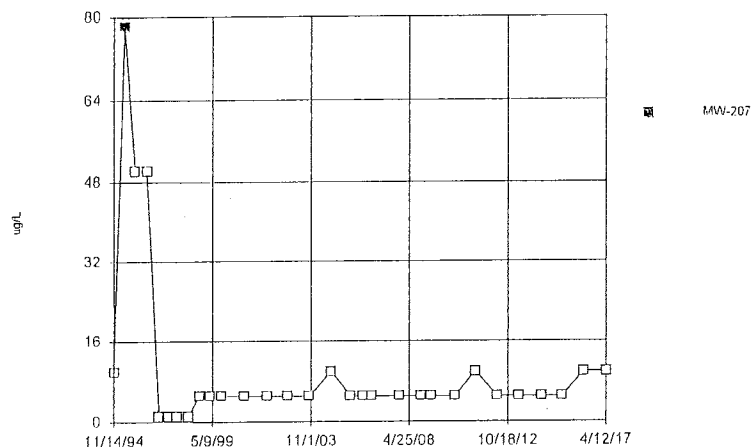


Time Series



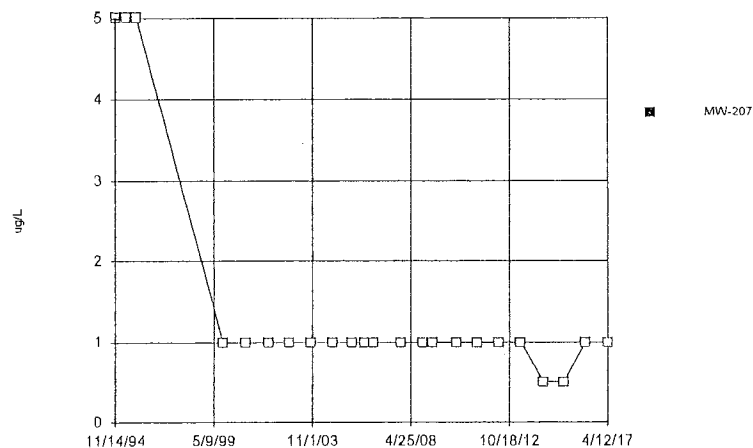
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Time Series



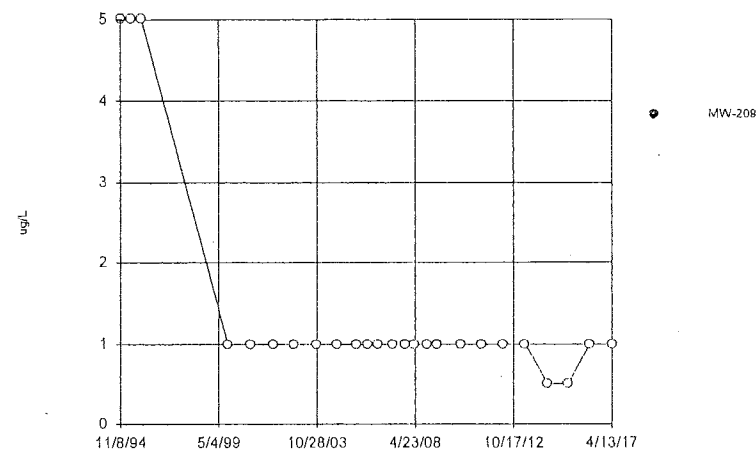
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Time Series



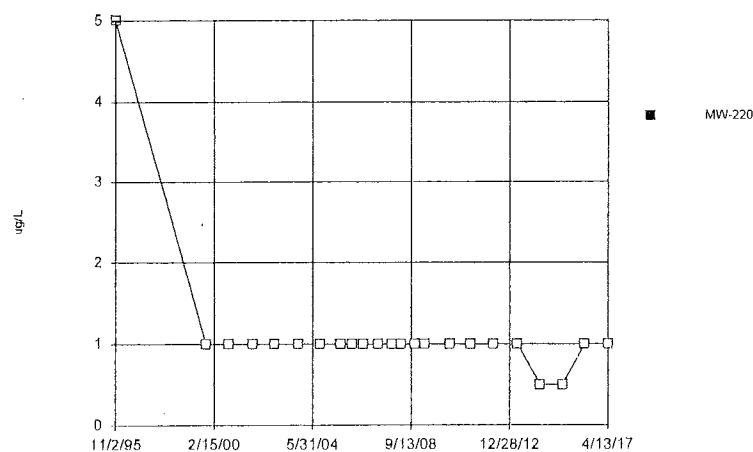
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Hollow symbols indicate censored values.

Time Series



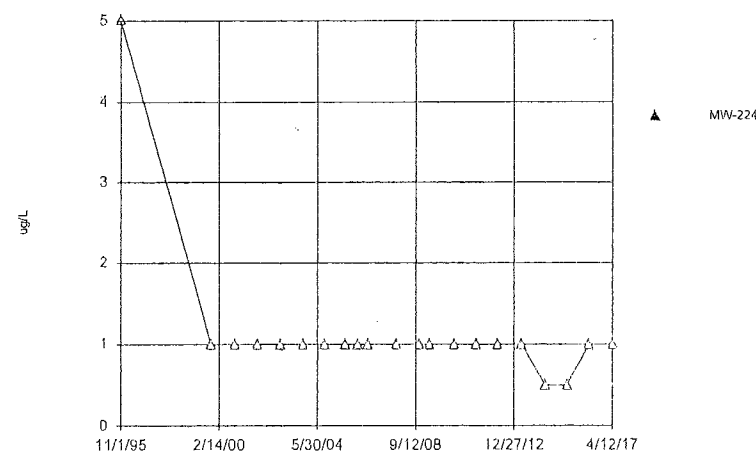
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Time Series



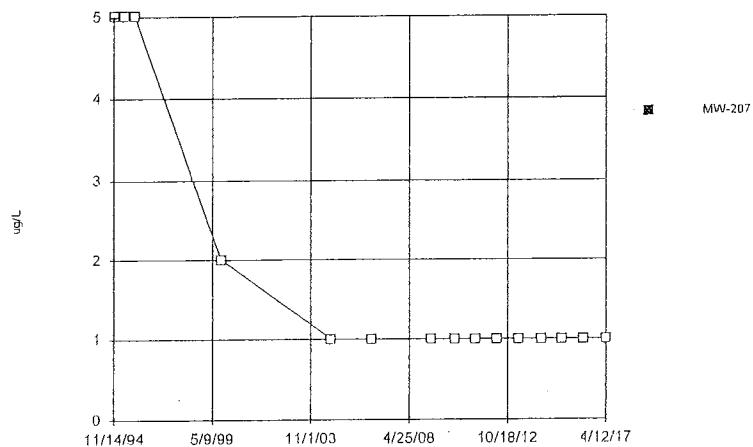
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Time Series



Result™ v 5.5.31 Software Licensed to Eggen & Associates, Inc. UG
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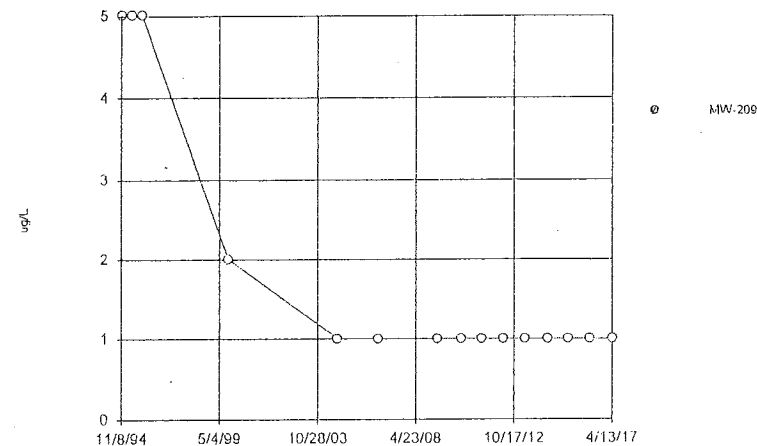
Time Series



Constituent: Chlorobenzene Analysis Run 4/28/2017 1:18 PM View: UIU Time Series
Summit National Site Client: Summit National Site Data: Summit.National.Database

Result™ v 5.5.31 Software Licensed to Eggen & Associates, Inc. UG
Hollow symbols indicate censored values.

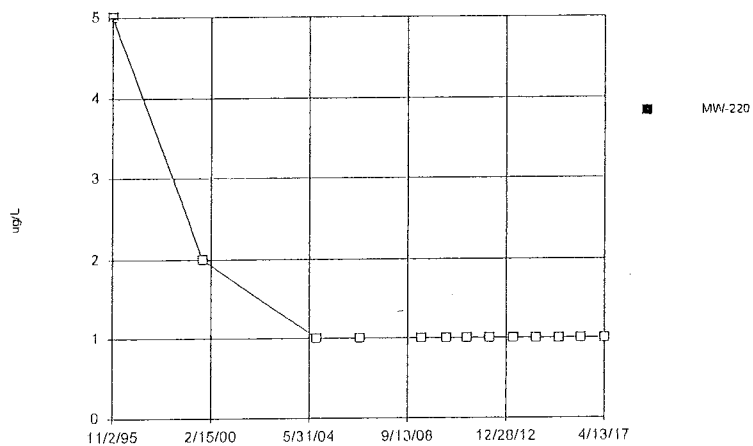
Time Series



Constituent: Chlorobenzene Analysis Run 4/28/2017 1:18 PM View: UIU Time Series
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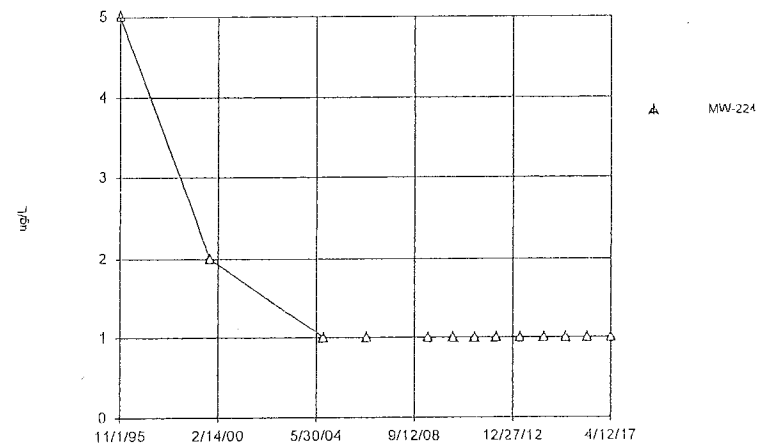
Time Series



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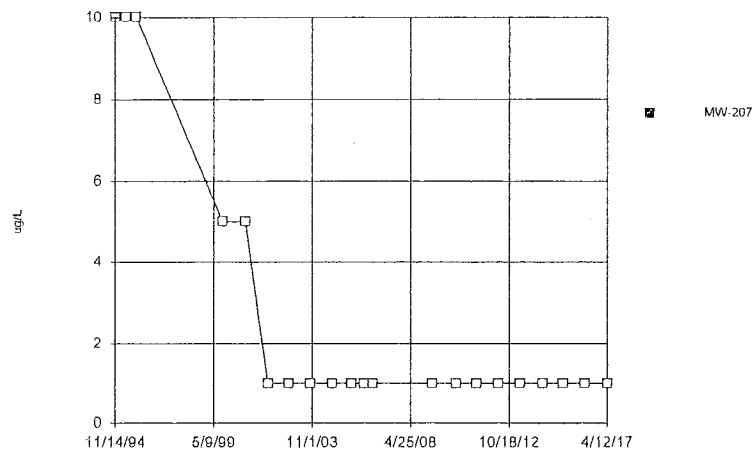
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Time Series



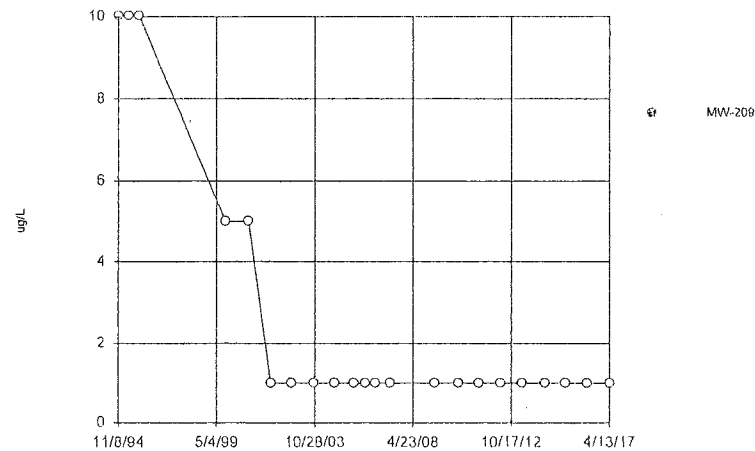
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Time Series



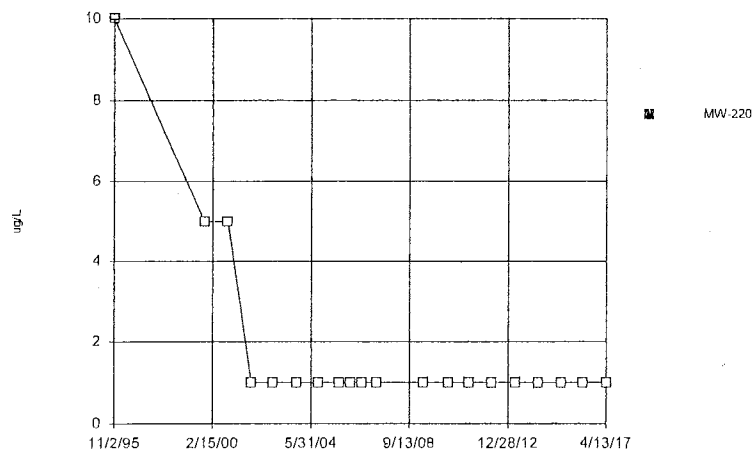
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Time Series



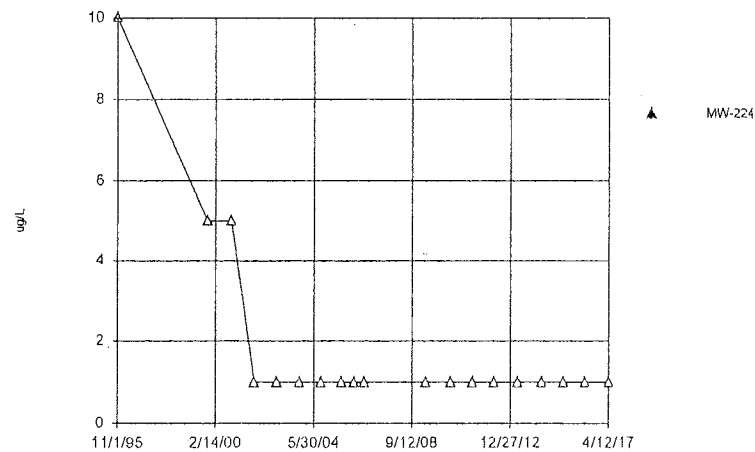
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Time Series



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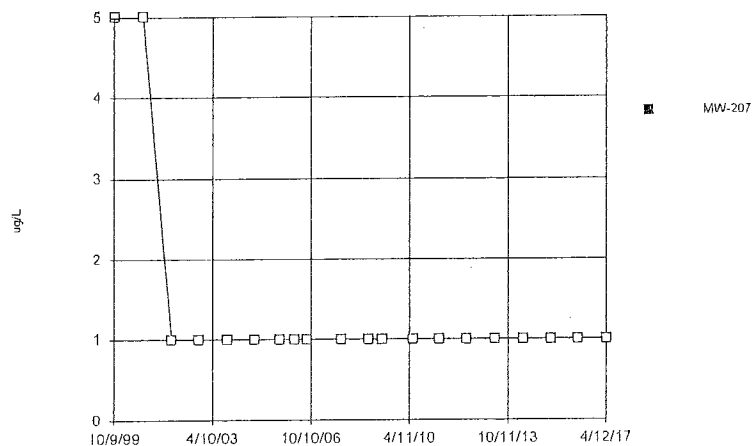
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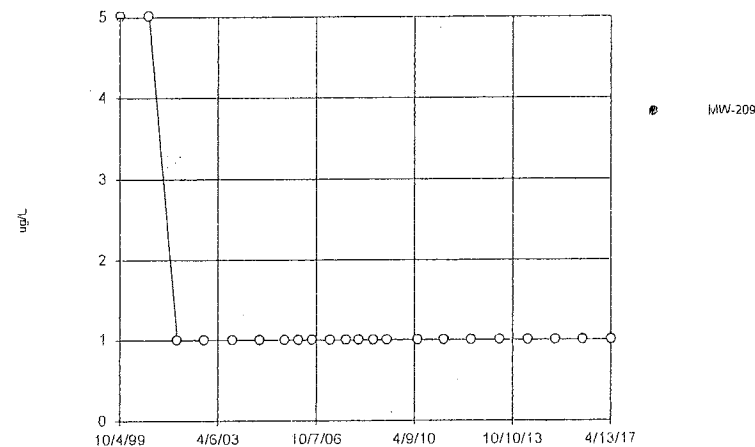
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Hollow symbols indicate censored values.

Time Series



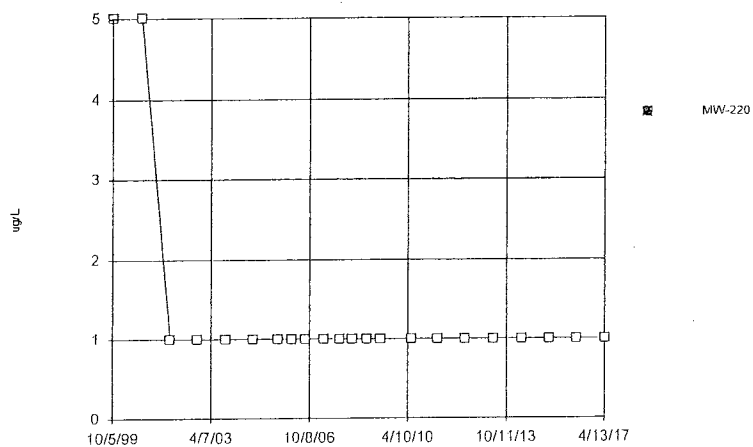
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Time Series



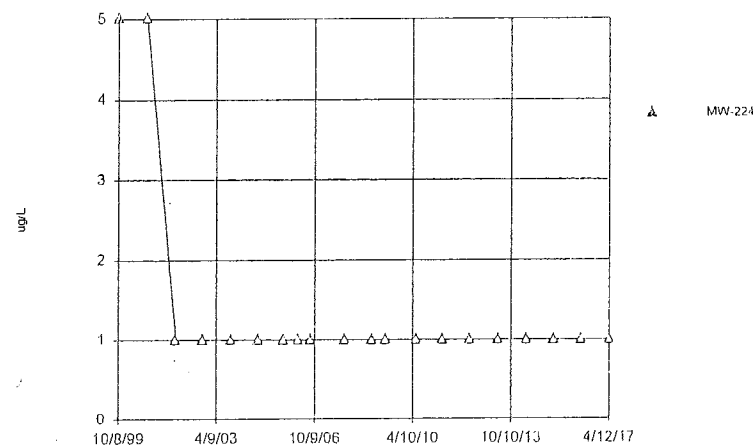
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Time Series



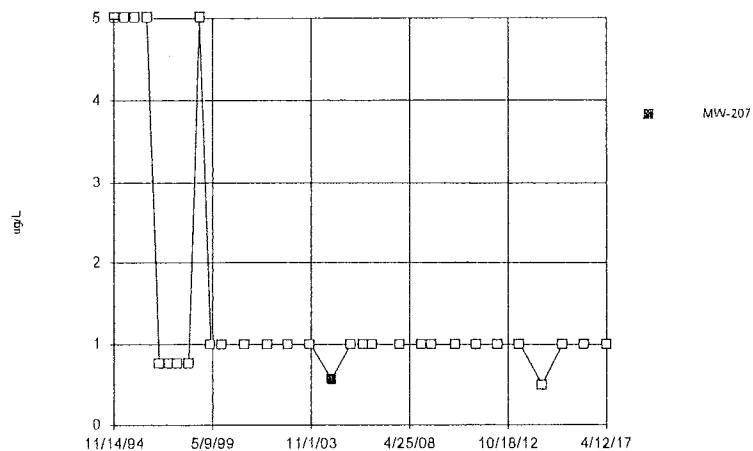
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Time Series



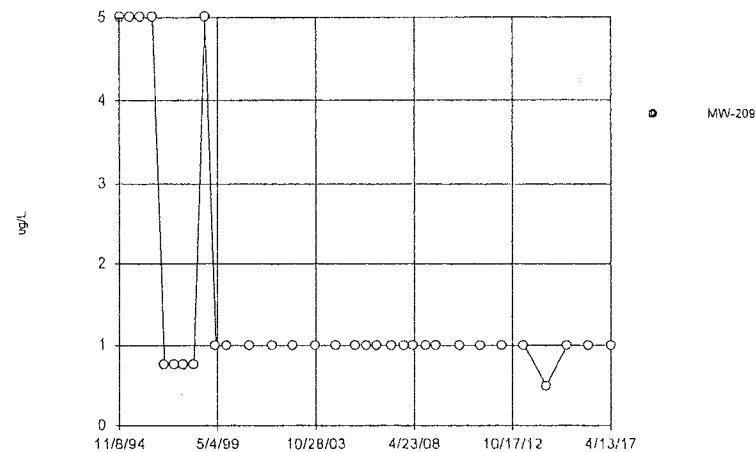
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Hollow symbols indicate censored values.

Time Series



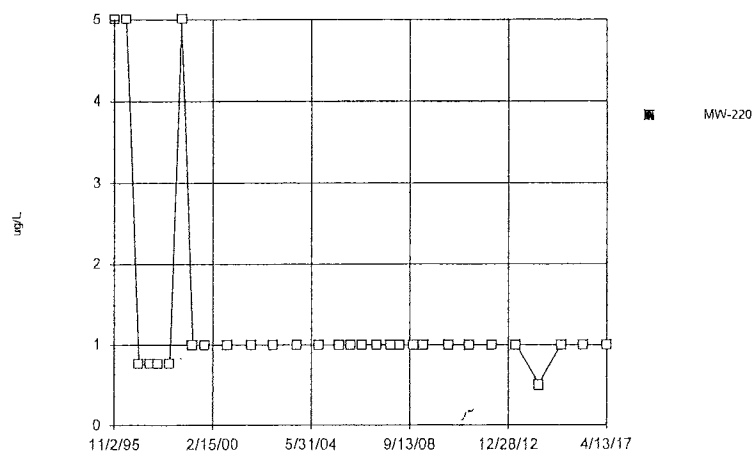
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Time Series



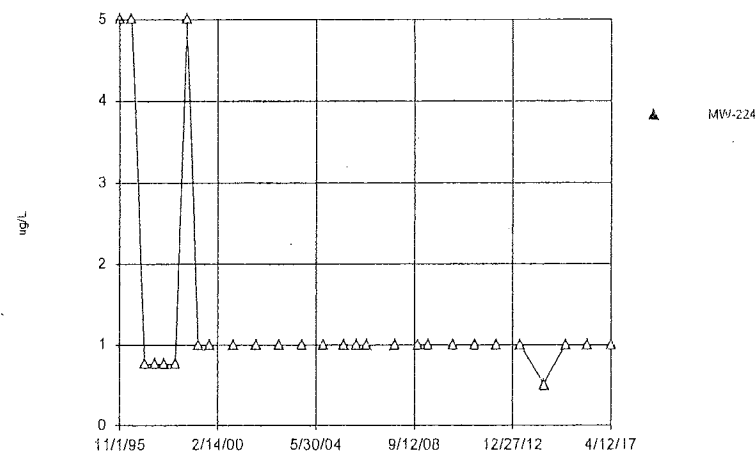
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Time Series



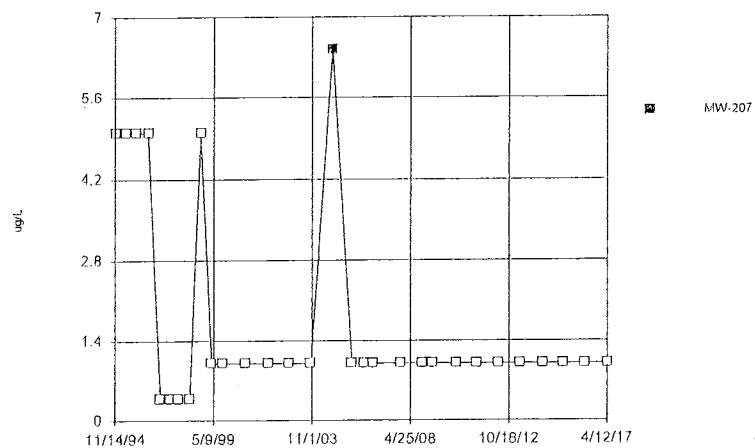
Senlex™ v.9.5.31 Software licensed to Engon & Associates, Inc. UI
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Time Series



Senliss™ v.9.5.31 Software licensed to Engen & Associates, Inc. UG
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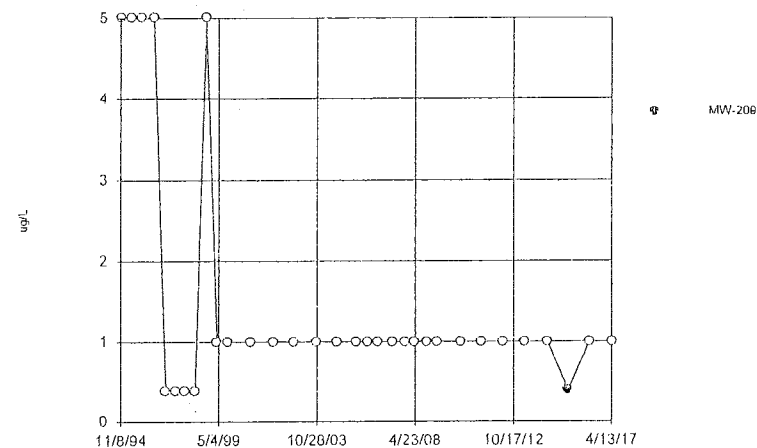
Time Series



Constituent: Toluene Analysis Run 4/28/2017 1:18 PM View: UIU Time Series
Summit National Site Client: Summit National Site Data: Summit.National.Database

Senliss™ v.9.5.31 Software licensed to Engen & Associates, Inc. UG
Hollow symbols indicate censored values.

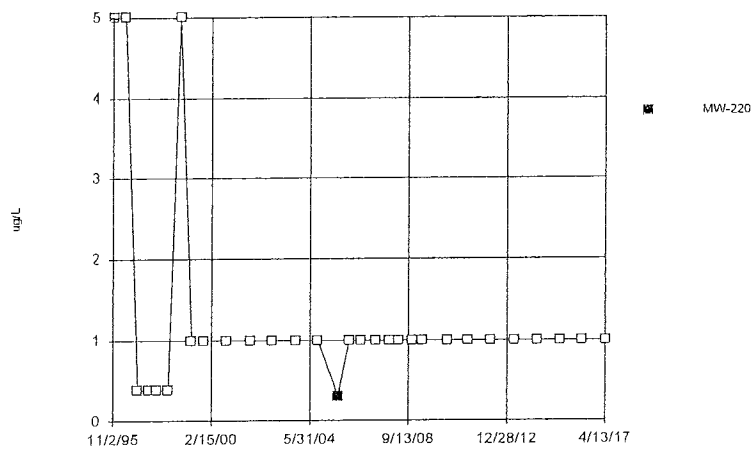
Time Series



Constituent: Toluene Analysis Run 4/28/2017 1:18 PM View: UIU Time Series
Summit National Site Client: Summit National Site Data: Summit.National.Database

Senliss™ v.9.5.31 Software licensed to Engen & Associates, Inc. UG
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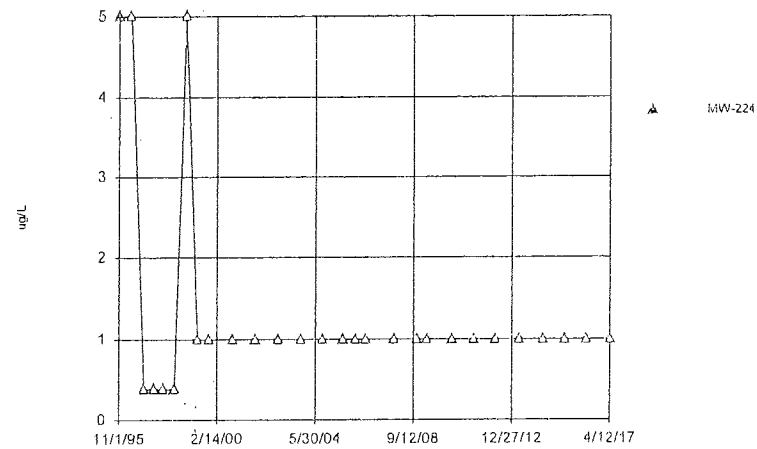
Time Series



Constituent: Toluene Analysis Run 4/28/2017 1:19 PM View: UIU Time Series
Summit National Site Client: Summit National Site Data: Summit.National.Database

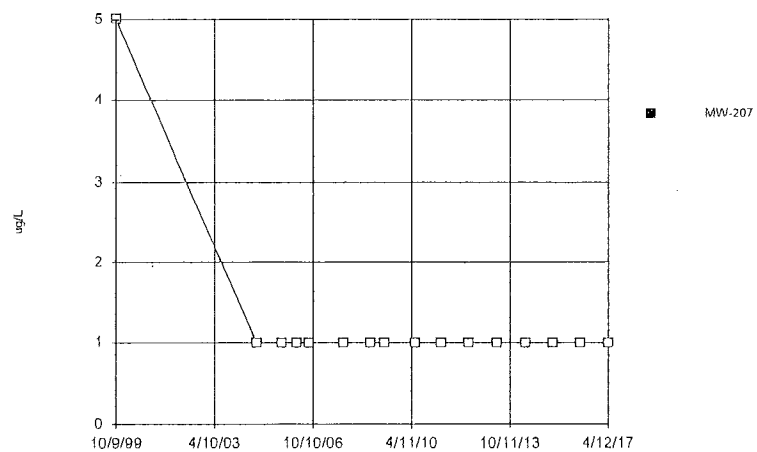
Senliss™ v.9.5.31 Software licensed to Engen & Associates, Inc. UG
Hollow symbols indicate censored values.

Time Series



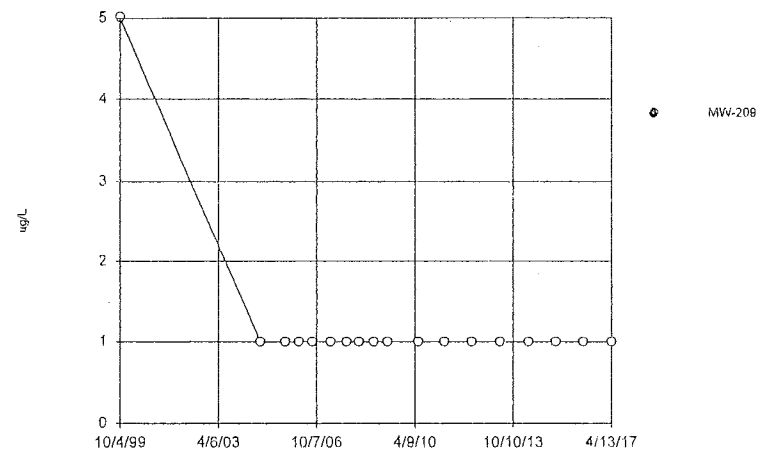
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Summit National Site Client: Summit National Site Data: Summit.National.Database

Time Series



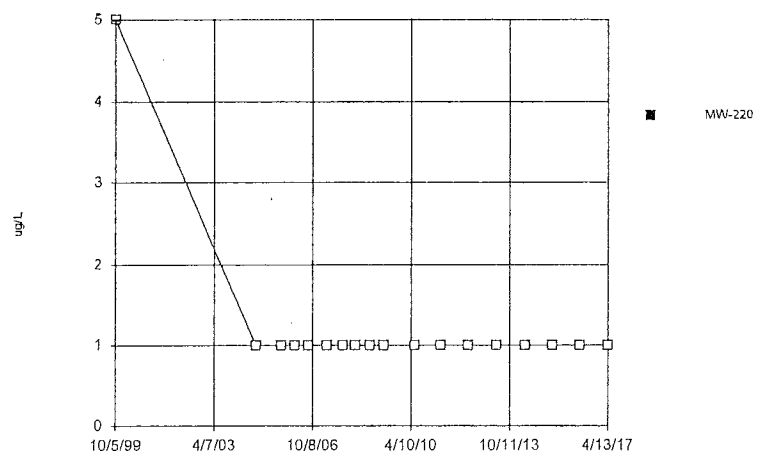
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Summit National Site Client: Summit National Site Data: Summit.National.Database

Time Series



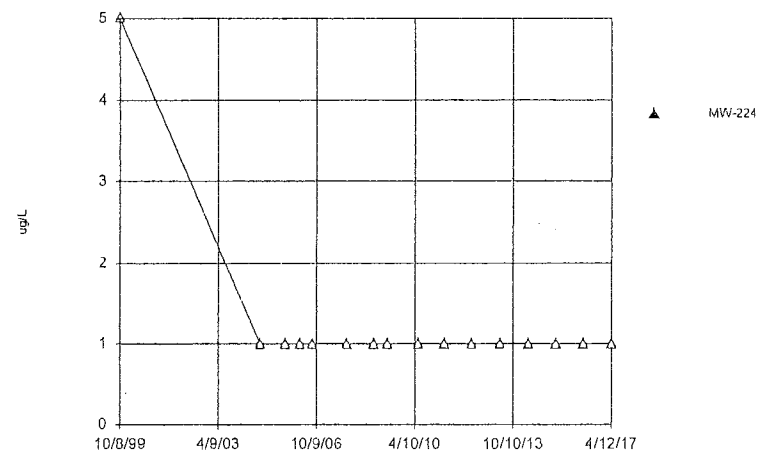
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Summit National Site Client: Summit National Site Data: Summit.National.Database

Time Series



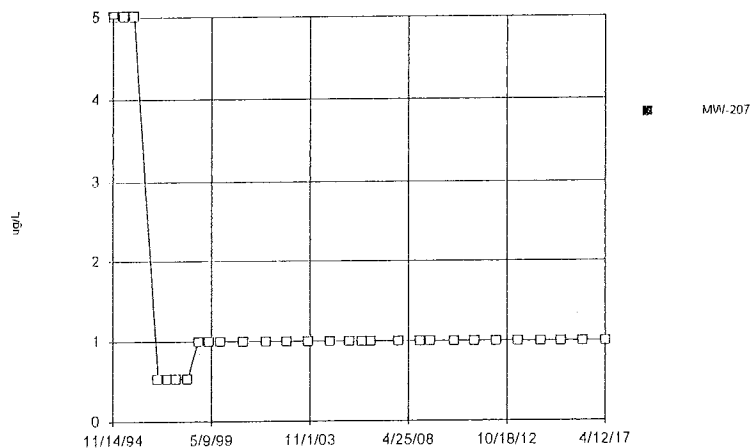
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Summit National Site Client: Summit National Site Data: Summit.National.Database

Time Series

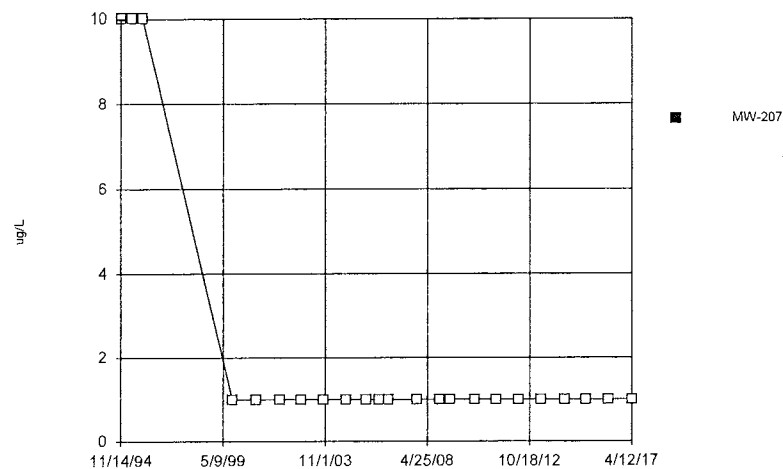


Constituent: trans-1,2-Dichloroethene Analysis Run 4/28/2017 1:19 PM View: UIU Time Series
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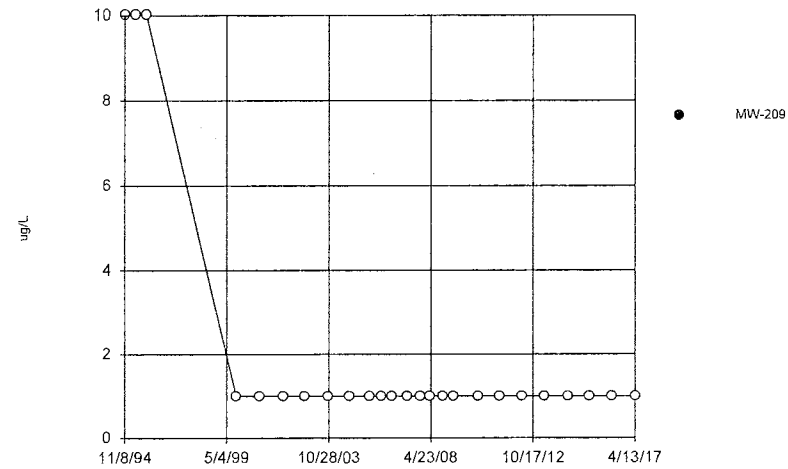
Time Series



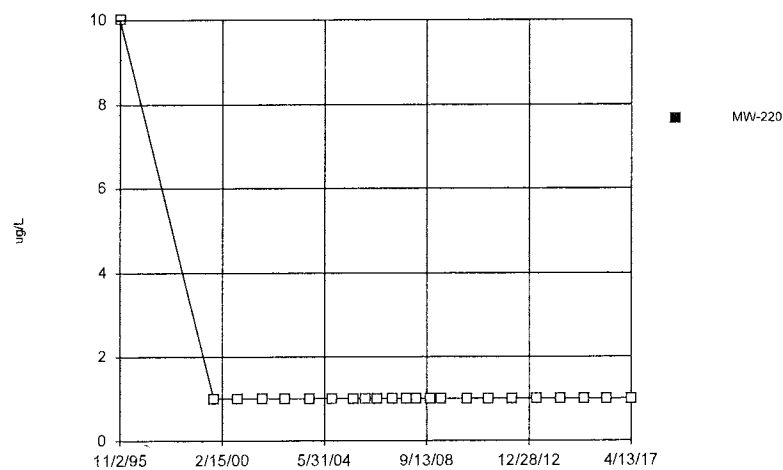
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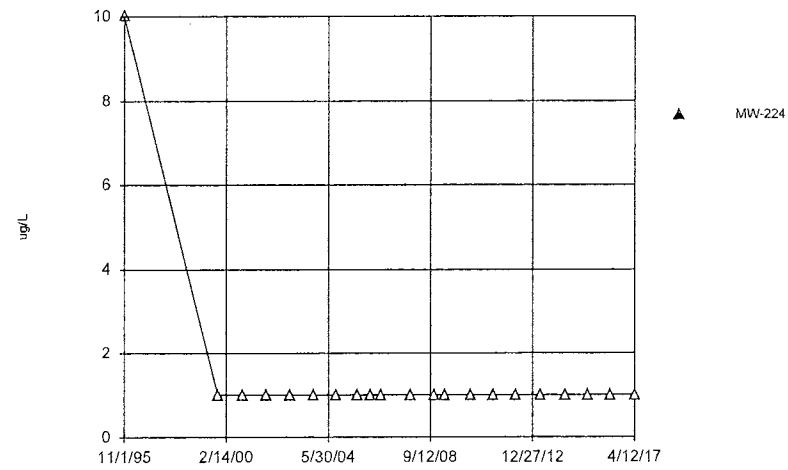
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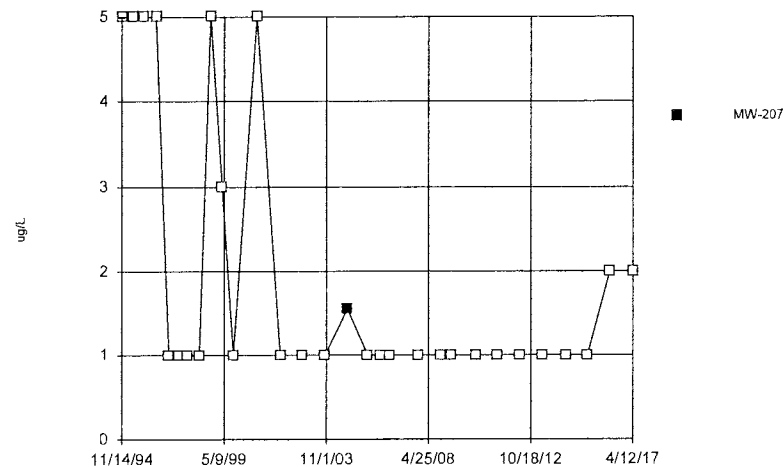
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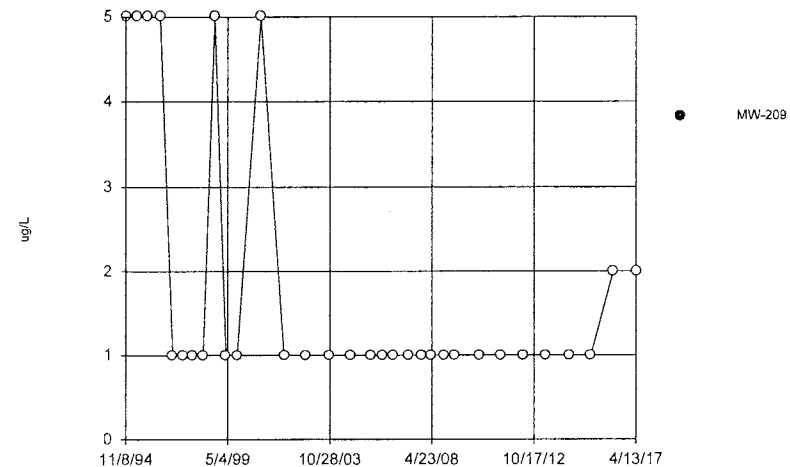
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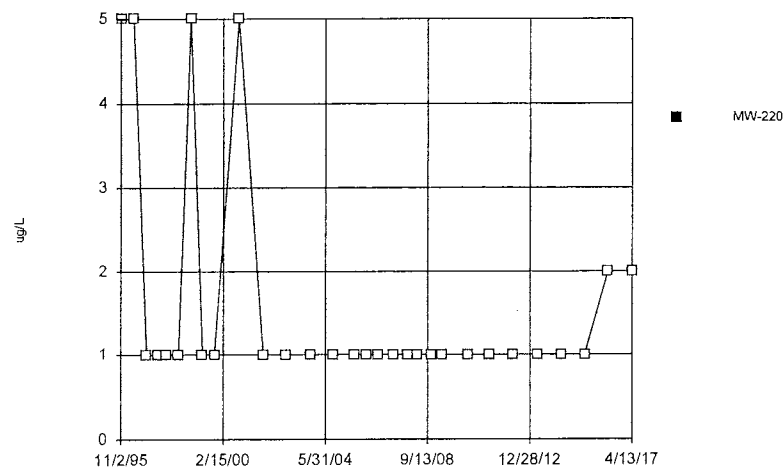
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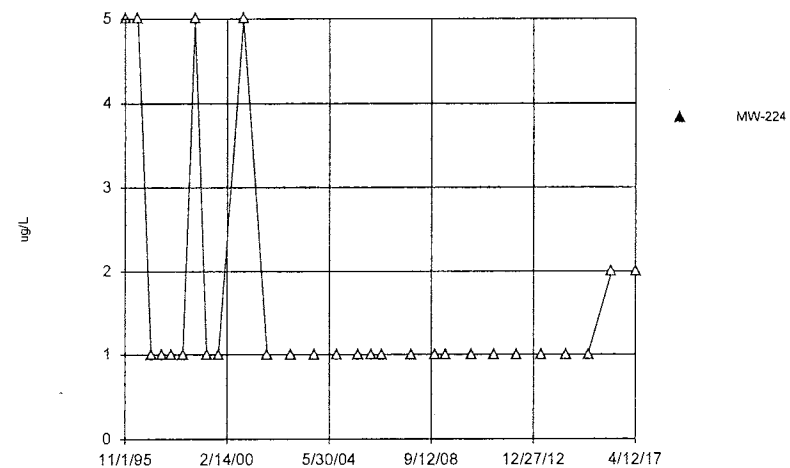
Time Series



Time Series

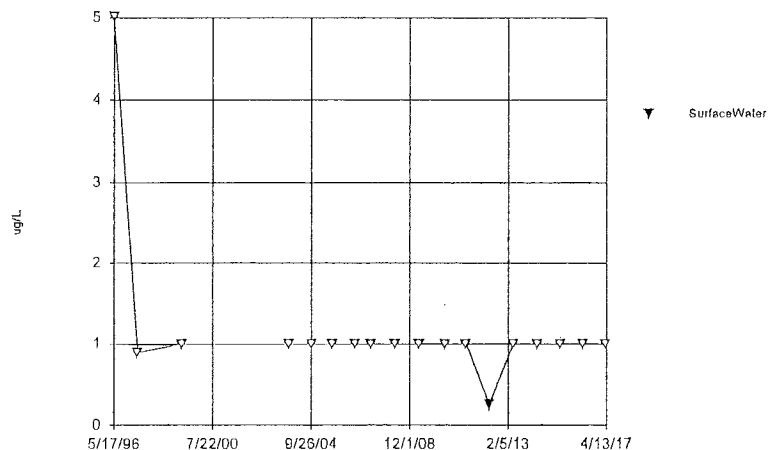


Time Series



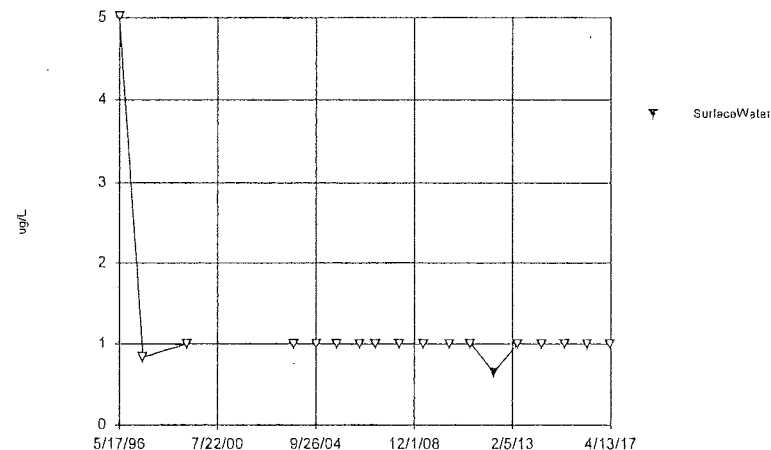
**APPENDIX E – TIME-SERIES PLOTS OF VOC RESULTS, S&E
DITCH SURFACE WATER**

Time Series



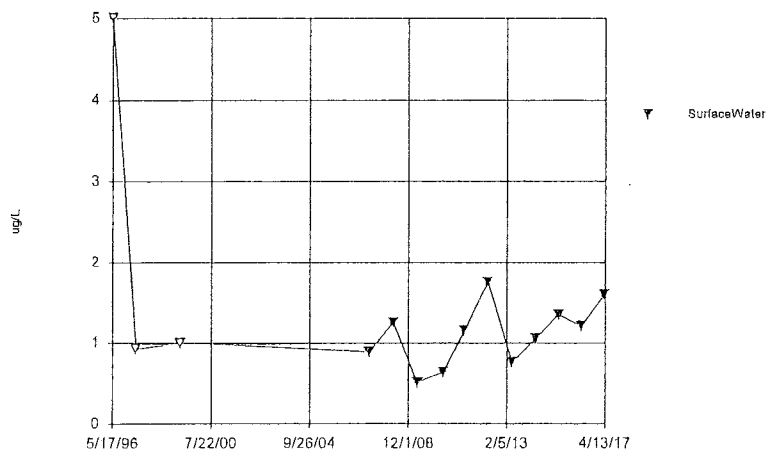
Constituent: 1,1-Dichloroethane Analysis Run 8/1/2017 9:53 AM View: Surface Water VOCs
Summit National Site Client: Summit National Site Data: Summit.National.Database

Time Series



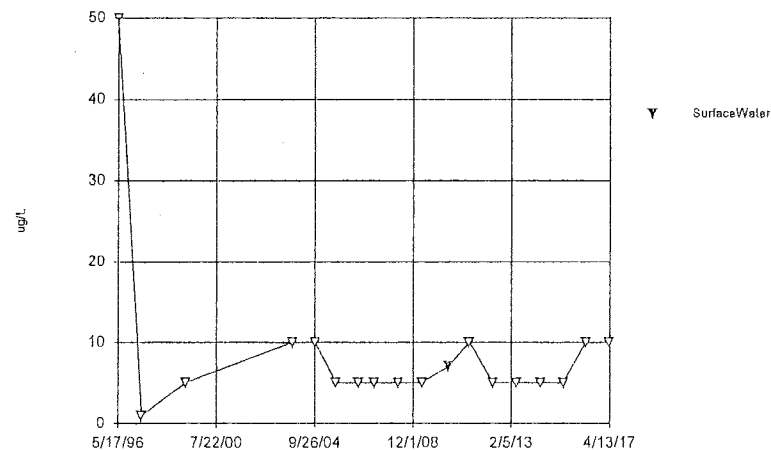
Constituent: 1,2-Dichloroethane Analysis Run 8/1/2017 9:53 AM View: Surface Water VOCs
Summit National Site Client: Summit National Site Data: Summit.National.Database

Time Series



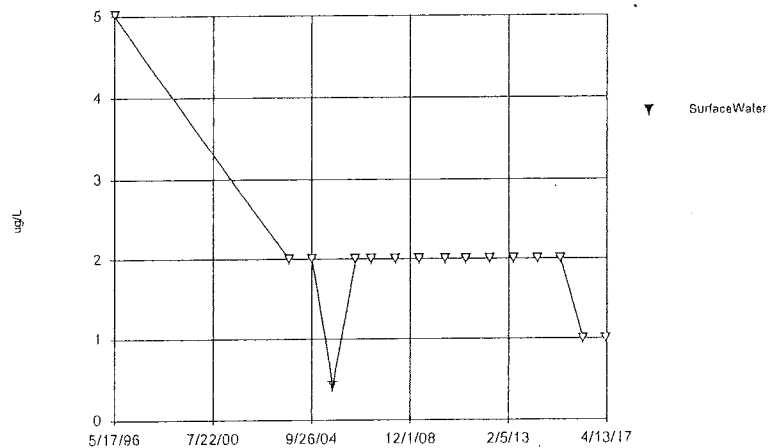
Constituent: 1,2-Dichloroethane [total] Analysis Run 8/1/2017 9:53 AM View: Surface Water VOCs
Summit National Site Client: Summit National Site Data: Summit.National.Database

Time Series



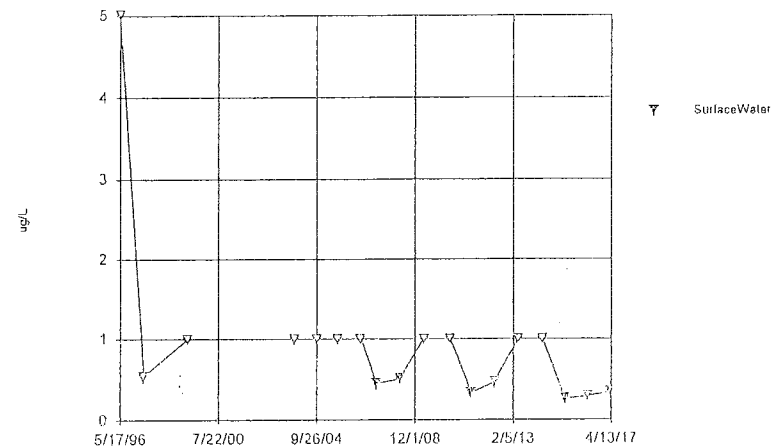
Constituent: Acetone Analysis Run 8/1/2017 9:53 AM View: Surface Water VOCs
Summit National Site Client: Summit National Site Data: Summit.National.Database

Time Series



Constituent: Carbon disulfide Analysis Run 8/1/2017 9:53 AM View: Surface Water VOCs
Summit National Site Client: Summit National Site Data: Summit National Database

Time Series



Constituent: Trichloroethene Analysis Run 8/1/2017 9:53 AM View: Surface Water VOCs
Summit National Site Client: Summit National Site Data: Summit National Database

APPENDIX F – SITE INSPECTION CHECKLIST AND PHOTOS

Site Inspection Checklist

I. SITE INFORMATION			
Site name: <u>Summit National</u>	Date of inspection: <u>06/21/2018</u>		
Location and Region: <u>Deerfield OH Region 5</u>	EPA ID: <u>OH0980608994</u>		
Agency, office, or company leading the five-year review: <u>US EPA Region 5</u>	Weather/temperature: <u>Sunny / 73°F</u>		
Remedy Includes: (Check all that apply) <table style="width: 100%; border: none;"> <tr> <td style="width: 50%; vertical-align: top;"> <input checked="" type="checkbox"/> Landfill cover/containment <input checked="" type="checkbox"/> Access controls <input checked="" type="checkbox"/> Institutional controls <input checked="" type="checkbox"/> Groundwater pump and treatment <input checked="" type="checkbox"/> Surface water collection and treatment <input type="checkbox"/> Other _____ </td> <td style="width: 50%; vertical-align: top;"> <input type="checkbox"/> Monitored natural attenuation <input checked="" type="checkbox"/> Groundwater containment <input type="checkbox"/> Vertical barrier walls <div style="margin-top: 10px;"> <u>- Gw. pump and treat is in shutdown</u> <u>- During RA construction, no surface water flow</u> </div> </td> </tr> </table>		<input checked="" type="checkbox"/> Landfill cover/containment <input checked="" type="checkbox"/> Access controls <input checked="" type="checkbox"/> Institutional controls <input checked="" type="checkbox"/> Groundwater pump and treatment <input checked="" type="checkbox"/> Surface water collection and treatment <input type="checkbox"/> Other _____	<input type="checkbox"/> Monitored natural attenuation <input checked="" type="checkbox"/> Groundwater containment <input type="checkbox"/> Vertical barrier walls <div style="margin-top: 10px;"> <u>- Gw. pump and treat is in shutdown</u> <u>- During RA construction, no surface water flow</u> </div>
<input checked="" type="checkbox"/> Landfill cover/containment <input checked="" type="checkbox"/> Access controls <input checked="" type="checkbox"/> Institutional controls <input checked="" type="checkbox"/> Groundwater pump and treatment <input checked="" type="checkbox"/> Surface water collection and treatment <input type="checkbox"/> Other _____	<input type="checkbox"/> Monitored natural attenuation <input checked="" type="checkbox"/> Groundwater containment <input type="checkbox"/> Vertical barrier walls <div style="margin-top: 10px;"> <u>- Gw. pump and treat is in shutdown</u> <u>- During RA construction, no surface water flow</u> </div>		
Attachments: <input type="checkbox"/> Inspection team roster attached <input type="checkbox"/> Site map attached			

Inspection was conducted from 10:00 am to 11:15 am.

Inspection Attendees

David Miller - D & M consultants - On-site O&M
 Mike Gibson - Eagon Associates - Project Coordinator
 Andy Graham - Eagon Associates - Alternate Project coordinator
 Pegan Williams - OEPA - State Project Manager

II. INTERVIEWS (Check all that apply)			
1.	O&M site manager <u>Mike Gibson</u>	Project Coordinator	06/21/2018
	Name	Title	Date
	Interviewed <input checked="" type="checkbox"/> at site <input type="checkbox"/> at office <input type="checkbox"/> by phone Phone no. _____		
	Problems, suggestions; <input type="checkbox"/> Report attached <u>N/A</u>		
2.	O&M staff <u>Dave Miller</u>	On Site O&M	06/21/2018
	Name	Title	Date
	Interviewed: <input checked="" type="checkbox"/> at site <input type="checkbox"/> at office <input type="checkbox"/> by phone Phone no. _____		
	Problems, suggestions; <input type="checkbox"/> Report attached <u>Company doing O&M D&M</u>		
3.	Local regulatory authorities and response agencies (i.e., State and Tribal offices, emergency response office, police department, office of public health or environmental health, zoning office, recorder of deeds, or other city and county offices, etc.) Fill in all that apply.		
	Agency <u>OEPA</u>	State	
	Contact <u>Regan Williams</u>	Project Manager	06/21/2018
	Name	Title	Date Phone no.
	Problems; suggestions; <input type="checkbox"/> Report attached _____		
	Agency _____	_____	_____
	Contact _____	_____	_____
	Name	Title	Date Phone no.
	Problems; suggestions; <input type="checkbox"/> Report attached _____		
	Agency _____	_____	_____
	Contact _____	_____	_____
	Name	Title	Date Phone no.
	Problems; suggestions; <input type="checkbox"/> Report attached _____		
4.	Other interviews (optional) <input type="checkbox"/> Report attached.		

III. ON-SITE DOCUMENTS & RECORDS VERIFIED (Check all that apply)				
1.	O&M Documents	<input checked="" type="checkbox"/> Readily available	<input checked="" type="checkbox"/> Up to date	<input type="checkbox"/> N/A
	<input checked="" type="checkbox"/> O&M manual	<input checked="" type="checkbox"/> Readily available	<input checked="" type="checkbox"/> Up to date	<input type="checkbox"/> N/A
	<input checked="" type="checkbox"/> As-built drawings	<input checked="" type="checkbox"/> Readily available	<input checked="" type="checkbox"/> Up to date	<input type="checkbox"/> N/A
	<input checked="" type="checkbox"/> Maintenance logs	<input checked="" type="checkbox"/> Readily available	<input checked="" type="checkbox"/> Up to date	<input type="checkbox"/> N/A
Remarks _____				
2.	Site-Specific Health and Safety Plan	<input checked="" type="checkbox"/> Readily available	<input checked="" type="checkbox"/> Up to date	<input type="checkbox"/> N/A
	<input type="checkbox"/> Contingency plan/emergency response plan	<input checked="" type="checkbox"/> Readily available	<input checked="" type="checkbox"/> Up to date	<input type="checkbox"/> N/A
Remarks _____				
3.	O&M and OSHA Training Records	<input type="checkbox"/> Readily available	<input type="checkbox"/> Up to date	<input type="checkbox"/> N/A
Remarks _____				
4.	Permits and Service Agreements	<input checked="" type="checkbox"/> Readily available	<input checked="" type="checkbox"/> Up to date	<input type="checkbox"/> N/A
	<input type="checkbox"/> Air discharge permit	<input type="checkbox"/> Readily available	<input type="checkbox"/> Up to date	<input type="checkbox"/> N/A
	<input type="checkbox"/> Effluent discharge	<input checked="" type="checkbox"/> Readily available	<input checked="" type="checkbox"/> Up to date	<input type="checkbox"/> N/A
	<input checked="" type="checkbox"/> Waste disposal, POTW	<input checked="" type="checkbox"/> Readily available	<input checked="" type="checkbox"/> Up to date	<input type="checkbox"/> N/A
	<input type="checkbox"/> Other permits	<input type="checkbox"/> Readily available	<input type="checkbox"/> Up to date	<input type="checkbox"/> N/A
Remarks * <u>treatment system not in operation</u> <u>waste water sanitary holding tank</u> <u>permit with portage county</u>				
5.	Gas Generation Records	<input type="checkbox"/> Readily available	<input type="checkbox"/> Up to date	<input checked="" type="checkbox"/> N/A
Remarks _____				
6.	Settlement Monument Records	<input type="checkbox"/> Readily available	<input type="checkbox"/> Up to date	<input checked="" type="checkbox"/> N/A
Remarks _____				
7.	Groundwater Monitoring Records	<input checked="" type="checkbox"/> Readily available	<input type="checkbox"/> Up to date	<input type="checkbox"/> N/A
Remarks <u>Annual report submitted</u>				
8.	Leachate Extraction Records	<input type="checkbox"/> Readily available	<input type="checkbox"/> Up to date	<input checked="" type="checkbox"/> N/A
Remarks _____				
9.	Discharge Compliance Records	<input checked="" type="checkbox"/> Readily available	<input checked="" type="checkbox"/> Up to date	<input type="checkbox"/> N/A
	<input type="checkbox"/> Air	<input type="checkbox"/> Readily available	<input type="checkbox"/> Up to date	<input type="checkbox"/> N/A
	<input checked="" type="checkbox"/> Water (effluent)	<input checked="" type="checkbox"/> Readily available	<input checked="" type="checkbox"/> Up to date	<input type="checkbox"/> N/A
Remarks <u>not required any longer</u> <u>since Pump and treat system is in shutdown</u>				
10.	Daily Access/Security Logs	<input checked="" type="checkbox"/> Readily available	<input checked="" type="checkbox"/> Up to date	<input type="checkbox"/> N/A
Remarks <u>sign in/sign out sheets available</u> <u>for visitors</u>				

IV. O&M COSTS

1. **O&M Organization**

- | | |
|--|--|
| <input type="checkbox"/> State in-house | <input type="checkbox"/> Contractor for State |
| <input checked="" type="checkbox"/> PRP in-house | <input type="checkbox"/> Contractor for PRP |
| <input type="checkbox"/> Federal Facility in-house | <input type="checkbox"/> Contractor for Federal Facility |
| <input type="checkbox"/> Other _____ | |

2. **O&M Cost Records**

- ☒ Readily available ☒ Up to date
☐ Funding mechanism/agreement in place
 Original O&M cost estimate _____ ☐ Breakdown attached

Total annual cost by year for review period if available

From _____	To <u>2013</u>	<u>\$ 119,506</u>	<input checked="" type="checkbox"/> Breakdown attached
Date	Date	Total cost	
From _____	To <u>2014</u>	<u>\$ 202,665</u>	<input checked="" type="checkbox"/> Breakdown attached
Date	Date	Total cost	
From _____	To <u>2015</u>	<u>\$ 83,912</u>	<input checked="" type="checkbox"/> Breakdown attached
Date	Date	Total cost	
From _____	To <u>2016</u>	<u>\$ 70,429</u>	<input checked="" type="checkbox"/> Breakdown attached
Date	Date	Total cost	
From _____	To <u>2017</u>	<u>\$ 93,649</u>	<input checked="" type="checkbox"/> Breakdown attached
Date	Date	Total cost	

} in report

3. **Unanticipated or Unusually High O&M Costs During Review Period**

Describe costs and reasons: _____

N/A

V. ACCESS AND INSTITUTIONAL CONTROLS <input checked="" type="checkbox"/> Applicable <input type="checkbox"/> N/A			
A. Fencing			
1.	Fencing damaged <input checked="" type="checkbox"/> Location shown on site map <input checked="" type="checkbox"/> Gates secured <input type="checkbox"/> N/A	Remarks: <u>Site manager indicated site is located in dangerous intersection. There's been instances of truck accidents damaging the fence, fence repaired.</u>	
B. Other Access Restrictions			
1.	Signs and other security measures <input type="checkbox"/> Location shown on site map <input checked="" type="checkbox"/>	Remarks: <u>Site has 24/7 emergency automatic call system.</u>	
C. Institutional Controls (ICs)			
1.	Implementation and enforcement		
	Site conditions imply ICs not properly implemented <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A Site conditions imply ICs not being fully enforced <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A		
	Type of monitoring (e.g., self-reporting, drive by) <u>Self reporting</u> Frequency <u>Weekly IC inspections, Annual Certification</u> Responsible party/agency <u>PRP</u> Contact <u>Mike Gibson</u> <u>Project Coordinator</u> <u>06/21/18</u> <div style="display: flex; justify-content: space-around; font-size: small;"> Name Title Date Phone no. </div>		
	Reporting is up-to-date <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A Reports are verified by the lead agency <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		
	Specific requirements in deed or decision documents have been met <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A Violations have been reported <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A		
	Other problems or suggestions: <input type="checkbox"/> Report attached <div style="text-align: center; font-size: 2em; margin-top: 10px;">N/A</div>		
2.	Adequacy <input checked="" type="checkbox"/> ICs are adequate <input type="checkbox"/> ICs are inadequate <input type="checkbox"/> N/A Remarks: <u>Ohio Environmental Coherent Under UECIA.</u>		
D. General			
1.	Vandalism/trespassing <input type="checkbox"/> Location shown on site map <input checked="" type="checkbox"/> No vandalism evident Remarks: <u>However the project coordinator indicated interest of the property people break monitoring well locks. weekly inspections whenever this happens take care of this</u>		
2.	Land use changes on site <input type="checkbox"/> N/A Remarks: <u>no land use changes</u>		
3.	Land use changes off site <input type="checkbox"/> N/A Remarks: <u>no land use changes</u>		

VI. GENERAL SITE CONDITIONS			
A. Roads <input checked="" type="checkbox"/> Applicable <input type="checkbox"/> N/A			
1.	Roads damaged Remarks _____	<input type="checkbox"/> Location shown on site map <input type="checkbox"/> Roads adequate <input type="checkbox"/> N/A	<i>site roads in good condition</i>
B. Other Site Conditions Remarks _____ _____ _____ _____ _____			
VII. LANDFILL COVERS <input type="checkbox"/> Applicable <input checked="" type="checkbox"/> N/A			
A. Landfill Surface			
1.	Settlement (Low spots) Areal extent _____ Remarks _____	<input type="checkbox"/> Location shown on site map <input type="checkbox"/> Settlement not evident Depth _____	
2.	Cracks Lengths _____ Remarks _____	<input type="checkbox"/> Location shown on site map <input type="checkbox"/> Cracking not evident Widths _____ Depths _____	
3.	Erosion Areal extent _____ Remarks _____	<input type="checkbox"/> Location shown on site map <input type="checkbox"/> Erosion not evident Depth _____	
4.	Holes Areal extent _____ Remarks _____	<input type="checkbox"/> Location shown on site map <input type="checkbox"/> Holes not evident Depth _____	
5.	Vegetative Cover <input type="checkbox"/> Grass <input type="checkbox"/> Cover properly established <input type="checkbox"/> No signs of stress <input type="checkbox"/> Trees/Shrubs (indicate size and locations on a diagram) Remarks _____		
6.	Alternative Cover (armored rock, concrete, etc.) <input type="checkbox"/> N/A Remarks _____		
7.	Bulges Areal extent _____ Remarks _____	<input type="checkbox"/> Location shown on site map <input type="checkbox"/> Bulges not evident Height _____	

8.	Wet Areas/Water Damage <input type="checkbox"/> Wet areas <input type="checkbox"/> Ponding <input type="checkbox"/> Seeps <input type="checkbox"/> Soft subgrade Remarks _____	<input type="checkbox"/> Wet areas/water damage not evident <input type="checkbox"/> Location shown on site map Areal extent _____ <input type="checkbox"/> Location shown on site map Areal extent _____ <input type="checkbox"/> Location shown on site map Areal extent _____ <input type="checkbox"/> Location shown on site map Areal extent _____
9.	Slope Instability <input type="checkbox"/> Slides <input type="checkbox"/> Location shown on site map <input type="checkbox"/> No evidence of slope instability Areal extent _____ Remarks _____	
B. Benches <input type="checkbox"/> Applicable <input type="checkbox"/> N/A (Horizontally constructed mounds of earth placed across a steep landfill side slope to interrupt the slope in order to slow down the velocity of surface runoff and intercept and convey the runoff to a lined channel.)		
1.	Flows Bypass Bench Remarks _____	<input type="checkbox"/> Location shown on site map <input type="checkbox"/> N/A or okay
2.	Bench Breached Remarks _____	<input type="checkbox"/> Location shown on site map <input type="checkbox"/> N/A or okay
3.	Bench Overtopped Remarks _____	<input type="checkbox"/> Location shown on site map <input type="checkbox"/> N/A or okay
C. Letdown Channels <input type="checkbox"/> Applicable <input type="checkbox"/> N/A (Channel lined with erosion control mats, riprap, grout bags, or gabions that descend down the steep side slope of the cover and will allow the runoff water collected by the benches to move off of the landfill cover without creating erosion gullies.)		
1.	Settlement <input type="checkbox"/> Location shown on site map <input type="checkbox"/> No evidence of settlement Areal extent _____ Depth _____ Remarks _____	
2.	Material Degradation <input type="checkbox"/> Location shown on site map <input type="checkbox"/> No evidence of degradation Material type _____ Areal extent _____ Remarks _____	
3.	Erosion <input type="checkbox"/> Location shown on site map <input type="checkbox"/> No evidence of erosion Areal extent _____ Depth _____ Remarks _____	
4.	Undercutting <input type="checkbox"/> Location shown on site map <input type="checkbox"/> No evidence of undercutting Areal extent _____ Depth _____ Remarks _____	

5.	Obstructions Type _____ <input type="checkbox"/> No obstructions <input type="checkbox"/> Location shown on site map Areal extent _____ Size _____ Remarks _____
6.	Excessive Vegetative Growth Type _____ <input type="checkbox"/> No evidence of excessive growth <input type="checkbox"/> Vegetation in channels does not obstruct flow <input type="checkbox"/> Location shown on site map Areal extent _____ Remarks _____
D. Cover Penetrations <input type="checkbox"/> Applicable <input type="checkbox"/> N/A	
1.	Gas Vents <input type="checkbox"/> Active <input type="checkbox"/> Passive <input type="checkbox"/> Properly secured/locked <input type="checkbox"/> Functioning <input type="checkbox"/> Routinely sampled <input type="checkbox"/> Good condition <input type="checkbox"/> Evidence of leakage at penetration <input type="checkbox"/> Needs Maintenance <input type="checkbox"/> N/A Remarks _____
2.	Gas Monitoring Probes <input type="checkbox"/> Properly secured/locked <input type="checkbox"/> Functioning <input type="checkbox"/> Routinely sampled <input type="checkbox"/> Good condition <input type="checkbox"/> Evidence of leakage at penetration <input type="checkbox"/> Needs Maintenance <input type="checkbox"/> N/A Remarks _____
3.	Monitoring Wells (within surface area of landfill) <input type="checkbox"/> Properly secured/locked <input type="checkbox"/> Functioning <input type="checkbox"/> Routinely sampled <input type="checkbox"/> Good condition <input type="checkbox"/> Evidence of leakage at penetration <input type="checkbox"/> Needs Maintenance <input type="checkbox"/> N/A Remarks _____
4.	Leachate Extraction Wells <input type="checkbox"/> Properly secured/locked <input type="checkbox"/> Functioning <input type="checkbox"/> Routinely sampled <input type="checkbox"/> Good condition <input type="checkbox"/> Evidence of leakage at penetration <input type="checkbox"/> Needs Maintenance <input type="checkbox"/> N/A Remarks _____
5.	Settlement Monuments <input type="checkbox"/> Located <input type="checkbox"/> Routinely surveyed <input type="checkbox"/> N/A Remarks _____
E. Gas Collection and Treatment <input type="checkbox"/> Applicable <input type="checkbox"/> N/A	
1.	Gas Treatment Facilities <input type="checkbox"/> Flaring <input type="checkbox"/> Thermal destruction <input type="checkbox"/> Collection for reuse <input type="checkbox"/> Good condition <input type="checkbox"/> Needs Maintenance Remarks _____
2.	Gas Collection Wells, Manifolds and Piping <input type="checkbox"/> Good condition <input type="checkbox"/> Needs Maintenance Remarks _____

3.	Gas Monitoring Facilities (<i>e.g.</i> , gas monitoring of adjacent homes or buildings)		
	<input type="checkbox"/> Good condition	<input type="checkbox"/> Needs Maintenance	<input type="checkbox"/> N/A
	Remarks _____		
F. Cover Drainage Layer <input type="checkbox"/> Applicable <input type="checkbox"/> N/A			
1.	Outlet Pipes Inspected	<input type="checkbox"/> Functioning	<input type="checkbox"/> N/A
	Remarks _____		
2.	Outlet Rock Inspected	<input type="checkbox"/> Functioning	<input type="checkbox"/> N/A
	Remarks _____		
G. Detention/Sedimentation Ponds <input type="checkbox"/> Applicable <input type="checkbox"/> N/A			
1.	Siltation Areal extent _____ Depth _____	<input type="checkbox"/> N/A	
	<input type="checkbox"/> Siltation not evident		
	Remarks _____		
2.	Erosion Areal extent _____ Depth _____		
	<input type="checkbox"/> Erosion not evident		
	Remarks _____		
3.	Outlet Works	<input type="checkbox"/> Functioning	<input type="checkbox"/> N/A
	Remarks _____		
4.	Dam	<input type="checkbox"/> Functioning	<input type="checkbox"/> N/A
	Remarks _____		
H. Retaining Walls <input type="checkbox"/> Applicable <input type="checkbox"/> N/A			
1.	Deformations	<input type="checkbox"/> Location shown on site map	<input type="checkbox"/> Deformation not evident
	Horizontal displacement _____	Vertical displacement _____	
	Rotational displacement _____		
	Remarks _____		
2.	Degradation	<input type="checkbox"/> Location shown on site map	<input type="checkbox"/> Degradation not evident
	Remarks _____		
I. Perimeter Ditches/Off-Site Discharge <input type="checkbox"/> Applicable <input type="checkbox"/> N/A			
1.	Siltation	<input type="checkbox"/> Location shown on site map	<input type="checkbox"/> Siltation not evident
	Areal extent _____	Depth _____	
	Remarks _____		

2.	Vegetative Growth <input type="checkbox"/> Location shown on site map <input type="checkbox"/> N/A <input type="checkbox"/> Vegetation does not impede flow Areal extent _____ Type _____ Remarks _____	
3.	Erosion <input type="checkbox"/> Location shown on site map <input type="checkbox"/> Erosion not evident Areal extent _____ Depth _____ Remarks _____	
4.	Discharge Structure <input type="checkbox"/> Functioning <input type="checkbox"/> N/A Remarks _____	
VIII. VERTICAL BARRIER WALLS <input type="checkbox"/> Applicable <input checked="" type="checkbox"/> N/A		
1.	Settlement <input type="checkbox"/> Location shown on site map <input type="checkbox"/> Settlement not evident Areal extent _____ Depth _____ Remarks _____	
2.	Performance Monitoring Type of monitoring _____ <input type="checkbox"/> Performance not monitored Frequency _____ <input type="checkbox"/> Evidence of breaching Head differential _____ Remarks _____	
IX. GROUNDWATER/SURFACE WATER REMEDIES <input checked="" type="checkbox"/> Applicable <input type="checkbox"/> N/A		
A. Groundwater Extraction Wells, Pumps, and Pipelines <input checked="" type="checkbox"/> Applicable <input type="checkbox"/> N/A		
1.	Pumps, Wellhead Plumbing, and Electrical <input checked="" type="checkbox"/> Good condition <input type="checkbox"/> All required wells properly operating <input type="checkbox"/> Needs Maintenance <input type="checkbox"/> N/A Remarks <u>Groundwater pump and treat is in shut down.</u>	
2.	Extraction System Pipelines, Valves, Valve Boxes, and Other Appurtenances <input checked="" type="checkbox"/> Good condition <input type="checkbox"/> Needs Maintenance Remarks _____	
3.	Spare Parts and Equipment <input checked="" type="checkbox"/> Readily available <input type="checkbox"/> Good condition <input type="checkbox"/> Requires upgrade <input type="checkbox"/> Needs to be provided Remarks _____	
B. Surface Water Collection Structures, Pumps, and Pipelines <input type="checkbox"/> Applicable <input checked="" type="checkbox"/> N/A		
1.	Collection Structures, Pumps, and Electrical <input type="checkbox"/> Good condition <input type="checkbox"/> Needs Maintenance Remarks _____	

2.	Surface Water Collection System Pipelines, Valves, Valve Boxes, and Other Appurtenances	<input type="checkbox"/> Good condition <input type="checkbox"/> Needs Maintenance Remarks _____
3.	Spare Parts and Equipment	<input type="checkbox"/> Readily available <input type="checkbox"/> Good condition <input type="checkbox"/> Requires upgrade <input type="checkbox"/> Needs to be provided Remarks _____
C. Treatment System <input checked="" type="checkbox"/> Applicable <input type="checkbox"/> N/A		
1.	Treatment Train (Check components that apply)	<input type="checkbox"/> Metals removal <input type="checkbox"/> Oil/water separation <input type="checkbox"/> Bioremediation <input type="checkbox"/> Air stripping <input type="checkbox"/> Carbon adsorbers <input type="checkbox"/> Filters <input type="checkbox"/> Additive (e.g., chelation agent, flocculent) <input type="checkbox"/> Others <input type="checkbox"/> Good condition <input type="checkbox"/> Needs Maintenance <input type="checkbox"/> Sampling ports properly marked and functional <input type="checkbox"/> Sampling/maintenance log displayed and up to date <input type="checkbox"/> Equipment properly identified <input type="checkbox"/> Quantity of groundwater treated annually _____ <input type="checkbox"/> Quantity of surface water treated annually _____ Remarks <u>Not in use (Has been moth balled)</u>
2.	Electrical Enclosures and Panels (properly rated and functional)	<input checked="" type="checkbox"/> N/A <input type="checkbox"/> Good condition <input type="checkbox"/> Needs Maintenance Remarks _____
3.	Tanks, Vaults, Storage Vessels	<input checked="" type="checkbox"/> N/A <input type="checkbox"/> Good condition <input type="checkbox"/> Proper secondary containment <input type="checkbox"/> Needs Maintenance Remarks _____
4.	Discharge Structure and Appurtenances	<input checked="" type="checkbox"/> N/A <input type="checkbox"/> Good condition <input type="checkbox"/> Needs Maintenance Remarks _____
5.	Treatment Building(s)	<input type="checkbox"/> N/A <input checked="" type="checkbox"/> Good condition (esp. roof and doorways) <input type="checkbox"/> Needs repair <input type="checkbox"/> Chemicals and equipment properly stored Remarks _____
6.	Monitoring Wells (pump and treatment remedy)	<input checked="" type="checkbox"/> Properly secured/locked <input checked="" type="checkbox"/> Functioning <input checked="" type="checkbox"/> Routinely sampled <input checked="" type="checkbox"/> Good condition <input type="checkbox"/> All required wells located <input type="checkbox"/> Needs Maintenance <input type="checkbox"/> N/A Remarks <u>need to place new permanent labels current</u>
D. Monitoring Data		

1.	Monitoring Data	<input checked="" type="checkbox"/> Is routinely submitted on time	<input type="checkbox"/> Is of acceptable quality
2.	Monitoring data suggests:	<input checked="" type="checkbox"/> Groundwater plume is effectively contained <input type="checkbox"/> Contaminant concentrations are declining	
E. Monitored Natural Attenuation			
1.	Monitoring Wells (natural attenuation remedy)		
	<input checked="" type="checkbox"/> Properly secured/locked <input type="checkbox"/> All required wells located	<input type="checkbox"/> Functioning <input type="checkbox"/> Needs Maintenance	<input checked="" type="checkbox"/> Routinely sampled <input checked="" type="checkbox"/> Good condition <input type="checkbox"/> N/A
Remarks _____			
X. OTHER REMEDIES			
If there are remedies applied at the site which are not covered above, attach an inspection sheet describing the physical nature and condition of any facility associated with the remedy. An example would be soil vapor extraction.			
XI. OVERALL OBSERVATIONS			
A. Implementation of the Remedy			
Describe issues and observations relating to whether the remedy is effective and functioning as designed. Begin with a brief statement of what the remedy is to accomplish (i.e., to contain contaminant plume, minimize infiltration and gas emission, etc.). <div style="text-align: center; font-size: 2em; margin-top: 20px;">N/A</div>			
B. Adequacy of O&M			
Describe issues and observations related to the implementation and scope of O&M procedures. In particular, discuss their relationship to the current and long-term protectiveness of the remedy. <div style="text-align: center; font-size: 2em; margin-top: 20px;">N/A</div>			
C. Early Indicators of Potential Remedy Problems			

Describe issues and observations such as unexpected changes in the cost or scope of O&M or a high frequency of unscheduled repairs that suggest that the protectiveness of the remedy may be compromised in the future.

N/A

D. Opportunities for Optimization

Describe possible opportunities for optimization in monitoring tasks or the operation of the remedy.

N/A



Photo 1 – Groundwater Treatment System (currently Shutdown)

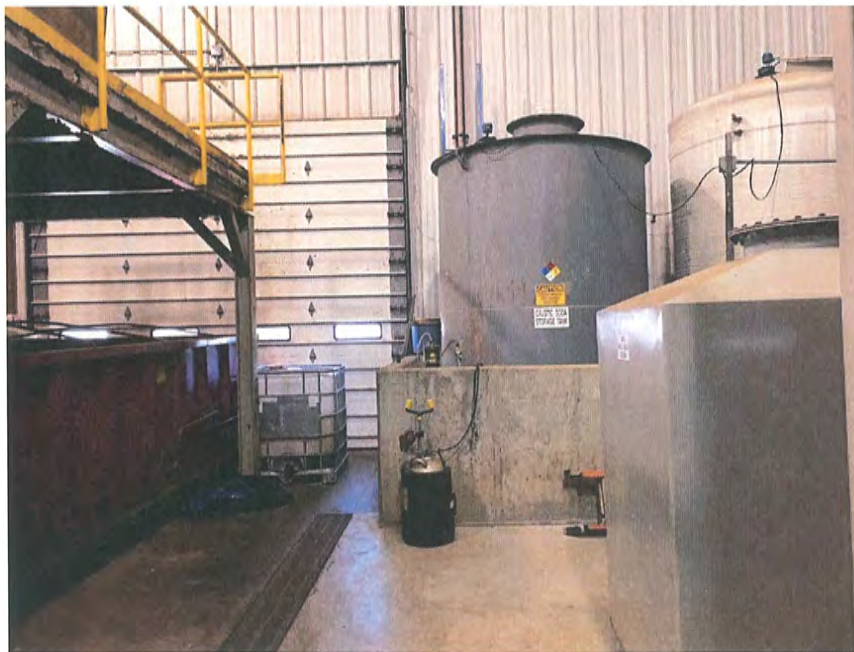


Photo 2 – Groundwater Treatment System (currently Shutdown)



Photo 3 – Final Site cover and Monitoring Wells overlooking north



Photo 4 – Groundwater Treatment System and Office Building overlooking north



Photo 5 – Manhole 4 Pipe and Media Drain System with Extraction Well 2 on background



Photo 6 – Perimeter road, Manhole 2 Pipe and Media Drain System, and Extraction well 1 overlooking southwest